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THE BRITISH JOURNAL OF CHILDREN'S DISEASES.

FOUNDED BY GEORGE CARPENTER, M.D.

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THE OLDEST JOURNAL IN ENGLISH AND THE REPRESENTATIVE ONE IN AMERICA DEVOTED EXCLUSIVELY TO THE DISEASES OF INFANTS AND CHILDREN.

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THE

BRITISH JOURNAL

OF

CHILDREN'S DISEASES.

VOL. XVIII. OCTOBER—DECEMBER, 1921. NOS. 214–216.

Original Articles.

CEPHALIC BRUITS IN CHILDREN.

By GEORGE F. STILL, M.A., M.D., F.R.C.P.,

Professor of Diseases of Children, King's College Hospital.

MOST recent text-books on diseases of children pass over in silence the subject of intracranial bruits; partly, no doubt, because these bruits have no recognised pathological significance, and partly perhaps because it has been generally assumed that they have no clinical interest. The following case, however, shows that this latter reason is ill-founded.

Boy, aged 8 years. For the past three years he had complained occasionally of noises in his head, particularly in his left ear. It troubled him specially at night and was sometimes sufficient to keep him awake. He was an excitable, imaginative boy, and so little attention had been paid to his complaints until a few days before I saw him. It had happened then that whilst he was lying on his mother's bed his head had rested against her's, and his mother, to her surprise, herself heard the noise in his head. Dr. A. Bevan was then consulted. He found nothing amiss in the boy's health. He asked the boy whether the noise was still present, whereupon the boy covered his left ear with the palm of his hand and said he could hear it still. When asked to let the doctor hear it, the boy pressed the doctor's head against his so as to bring his left ear in close contact with the doctor's right ear, and the doctor could then distinctly hear a systolic bruit. As the boy had had otitis media

with scarlet fever about three years earlier an ear specialist was called in consultation, but was unable to detect the bruit and found the ears normal. A day or two later I saw the boy with Dr. Bevan and the child gave me the same demonstration of the bruit. It was well heard at both ears, perhaps a little louder at the left than at the right, and was a low-pitched systolic bruit, very like the functional bruit which is not infrequently heard over the middle of the præcordium in children. It was definitely a bruit and not merely the thud of pulsation.

The occurrence of a bruit over the open fontanelle in infants is very generally known, but this intracranial bruit in older children and especially the recognition of its presence by the child himself are, I think, less known.

The late Sir William Osler (4) recorded a very similar case as long ago as 1880. His patient was a girl, aged 3 years, who was conscious of the bruit in her head, and in this case also the mother had noticed the sound. It was loudest in the temporal regions; it could be heard also over the carotids. Pressure on the carotids caused it to disappear. The bruit in the head was still audible when the child was 7 years old. The child was quite healthy otherwise.

Whatever, therefore, may be the significance of the bruit, it has, at least, this much of practical importance—that its presence may be recognised not only by the child but also by the parents, and may give rise to anxiety, so that it is, I think, worthy of consideration.

Osler states that there is remarkable unanimity amongst all who have written on the subject as to the age at which the murmur prevails. The extremes, he says, are the third month and the sixth year; the majority occur in the second year. He says that he does not know of any recorded instance of the murmur persisting so late as in the case he described. He refers to two writers who had dealt with the subject before him, namely, J. D. Fisher (1), of Boston, who first described this bruit in 1833—his paper was published in 1838—and S. S. Whitney (6), who wrote an article on the subject in 1843. Both these writers regarded the bruit as of pathological import, and indicative of some organic affection of the brain. Fisher states that it is a symptom of hydrocephalus, of acute inflammation (meningitis) and of cerebral abscess, and suggests that it is caused by pressure of the congested or distended brain upon the arteries at the base. Whitney goes further, and, finding it in 189 out of 225 cases of protracted and painful dentition, thinks that congestion of the brain due to dentition causes this bruit in a similar way. These

writers' observations refer chiefly to children at the age when the anterior fontanelle is still open.

Subsequent observers obtained results which did not agree either with the observations or with the conclusions of Fisher and Whitney. It became increasingly evident that the murmur was so frequently audible in children during the first three years of life that doubts were raised as to its having any pathological significance. Wirthgen (7), who found it in 22 out of 52 children, mostly under 4 years of age, thought that it was most often heard in children with strong heart-beat and vigorous carotid pulsation. With Hennig (2) he agreed that any condition diminishing the strength and vigour of a child caused the bruit to diminish or disappear—in fact, these two writers went so far as to suggest that absence of the bruit at the age when it is most commonly heard might be an indication of disease.

Later came some observations by a master observer, Henoch (3), who was much struck by the frequency of this bruit over the open fontanelle in rickets; he found it in 24 out of 33 rachitic children, and in the 9 cases in which it was not found thought that the negative observation was due only to the restlessness of the child under examination; he considered that this bruit might be of weight in the diagnosis of rickets. Like the previously-mentioned writers, Henoch seems to have regarded the open fontanelle as almost essential to the audibility of the bruit, which he says gradually disappears as the fontanelle closes, though he admits that in rare cases it may be heard at some other part of the skull when the fontanelle is closed.

Roger (5), with undisguised scepticism for the observations of those earlier writers on the subject who claimed to have detected the bruit in patients who had long passed the age of the open fontanelle, says: "La persistance des fontanelles me paraît une condition anatomique nécessaire pour que l'oreille puisse percevoir le souffle céphalique." But as he himself mentions cases up to the age of 4 years, with "fontanelle fermée," in whom nevertheless the bruit was heard, it is to be understood that it is only complete union and ossification of the sutures which he regards as making it impossible to hear the bruit. Nevertheless in two of his cases, aged 13 and 14 years respectively, with anæmia, he admits having heard a bruit in the one over the forehead and temple, and in the other, more generally, over "the skull"; in both these he considers the bruit to be quite different in origin from the "souffle cephalique," and simply transmitted from the vessels in the neck.

Like Henoch, Roger found the cephalic bruit most frequent,

indeed, almost constant in rickets, but its occurrence in rickets he regarded as only a consequence of the anæmia which accompanies rickets. For him the cephalic bruit is an expression of anæmia and of nothing more.

My own interest was chiefly in the bruit as heard in children whose fontanelles were already closed, but incidentally I extended my observations to the younger children also, as the following table shows :

	No. of cases examined.	Cases with bruit.
Fontanelle closed . . .	130	13
Fontanelle open . . .	70	17

The youngest case in which I detected the bruit was 5 months old, the oldest $15\frac{1}{4}$ years, but it must be added that no patient beyond this age was examined, so that I have no proof that the bruit might not be heard in older persons.

The method of examination when the fontanelle was open was by the stethoscope applied over the fontanelle ; in the other group direct application of the observer's ear to the patient's ear.

It is perhaps worth pointing out that the apposition of ear to ear must be very exact, otherwise the necessary resonating cavity will not be formed and the bruit will not be heard. My House-Physician at King's College Hospital, Mr. C. B. Dansie, suggested to me a simple device which I have found useful, especially in demonstrating the bruit to others. The head end of another binaural stethoscope is used to replace the chest end of the observer's stethoscope and its ear-pieces are placed in the child's ears : in this way the bruit, if present, is heard with great distinctness.

The relative frequency at different ages in the series of cases examined is seen in the accompanying table :

Age.	Cases with bruit.	No. of cases examined.
Under 6 mths. .	1 (aged 5 months)	30
6 mths.–12 mths.	6	17
1–2 yrs. .	10	25
2–3 yrs. .	2	16
3–4 yrs. .	7	19
4–5 yrs. .	0	23
5–6 yrs. .	0	12
6–7 yrs. .	1	10

Age.	Cases with bruit.	No. of cases examined.
7–8 yrs.	1	8
8–9 yrs.	0	11
9–10 yrs.	1	8
10–11 yrs.	0	7
11–12 yrs.	0	5
12–13 yrs.	0	1
13–14 yrs.	0	3
14–15 yrs.	0	2
15–16 yrs.	1	3

It is evident that the bruit is very infrequent in children over the age of four years. It was present only in four out of 93 children between 4 and 16 years old.

Sex seems to play no part in it, as the following figures show :

Cases with Fontanelle Open.

	No. examined.	Bruit present.
Boys	33	9
Girls	37	8

Cases with Fontanelle Closed.

	No. examined.	Bruit present.
Boys	79	6
Girls	51	7

It would seem that the bruit is of similar origin in both groups of cases, for I examined several of those whose fontanelle was still open to determine whether the bruit heard at the fontanelle was also audible at the ears in these cases, and found that in 11 out of 12 cases examined as to this point the bruit was heard in both positions. It seems, therefore, reasonable to suppose that when the bruit is heard only at the ears in a child whose fontanelle has closed this is a persistence for some reason of the audibility of the bruit which is so frequent in the first two years of life. One may suppose that if these children—for instance, the girl, aged $15\frac{1}{4}$ years, included above—had been examined at a year old a bruit would have been heard at the fontanelle as well as at the ears.

In character they are the same : a systolic blowing, sometimes almost twanging bruit, clearly, I think, of arterial origin, and very

different from the continuous hum of a venous bruit. I have no theory to offer of the production of this murmur. It is certainly not conveyed either from the heart or from the vessels of the neck. I have particularly examined several children with loud cardiac murmurs, some of congenital and some of rheumatic origin, and found the cephalic murmurs to be entirely absent in most of these; I have also observed that in a case where there was a loud, continuous, venous bruit in the neck, the bruit heard at the ears was entirely different in character, being sharply systolic. It seems possible that the tortuosity of the carotids at the base of the skull may be a factor, and that just as with growth in length of the infant the colon gradually becomes relatively shorter and therefore less subject to sharp turns and kinks, so there may be some slight straightening of the course of the carotid with increasing size of the skull. The persistence of audibility beyond the usual age may, I would suggest, be related to unusual thinness of the bony wall of the carotid canal, which occurs as a peculiarity in some individuals. I have been entirely unable to connect the cephalic bruit with any particular morbid condition; amongst the 30 cases in which I detected it all sorts of diseases were represented—scurvy, epilepsy, achondroplasia, nephritis, asthma, congenital syphilis, congenital heart disease, acidosis, dyspepsia, and four with nothing at all. Amongst those in which it was absent were three Mongols and two cases of hydrocephalus; and rickets did not figure with any special frequency amongst my cases, but as they were mostly children of the well-to-do classes and so but little affected with rickets, this does not disprove the observations of others that a large proportion of rickety children show this bruit. Anæmia was by no means a constant feature.

Judging from the case described at the beginning of this article, as well as from two others in which the child was conscious of the noise in the head, I am inclined to think that the bruit is only heard by the child when the external ear is closed so as to form a resonating cavity; the boy above-mentioned, when asked if he still heard the noise, at once covered his ear with the palm of his hand and listened, and a similar result would occur with the ear lying pressed upon the pillow at night; indeed many persons are conscious of pulsation in the head when lying with the ear pressed upon a pillow. This simple thudding sound of pulsation is, however, quite distinct from the cephalic bruit, which in some cases is almost musical. One little boy, when I showed him how to hear the bruit by placing his palm over his ears, said it sounded "like the wind in the trees"; in

one case I have noted the murmur as sounding like "wind blowing through a keyhole."

As I have already implied, the cephalic bruit is of no serious import, but it is at least useful to know of its occurrence and of its innocence.

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LEUCOSARCOMA, LYMPHOSARCOMA, LYMPHADENOMA, AND INFECTIOUS MONONUCLEOSIS.

By F. Parkes Weber, M.A., M.D., F.R.C.P.

The term "leucosarcoma," introduced by Carl Sternberg (1) about 1905, includes sarcoma-like neoplasms associated with a leukæmic blood-picture, characterised by excess of large "lymphoid cells," such as are met with in cases of acute leukæmia. These large undifferentiated mononuclear cells can be regarded as pre-myelocytes or myeloblasts, or else as pre-lymphocytes or lymphoblasts. Under this heading of leucosarcoma or "leucosarcomatosis" cases of chloroma may be included as a subdivision; but perhaps the most typical examples are those of *mediastinal leucosarcomatosis*, in which there is an invasive tumour-like mass in the mediastinum, often apparently originating in the remnant of the thymus gland and tending to grow downwards over the pericardial sac.(2)

A case of mediastinal leucosarcomatosis, which I was able to diagnose during life, was that of a boy, aged 7 years, described by me in 1919.(3) The boy had enjoyed good health till the winter of 1917–1918, when he suffered from troublesome coughing. During the two months previous to admission to hospital (May the 11th,

1918) increasing pallor had been observed. In the hospital there was œdema, moderate ascites and great pallor. The liver and spleen were enlarged. There was moderate discrete enlargement of the superficial lymphatic glands in the neck, axillæ and groins. In the left eye was a retinal hæmorrhage, and there were scattered cutaneous petechiæ, especially on the lower extremities. These, together with the glandular enlargement, suggested an examination of the child's blood, which revealed the presence of (doubtless acute) myeloid or myeloblastic leukæmia. There was considerable dulness to percussion over the upper part of the chest (sternum and adjoining parts on both sides of the sternum), and a Röntgen skiagram of the thorax showed great shadowing in that region, suggesting the presence of a tumour-like mass in the upper mediastinum above the heart. Death occurred on May the 19th, eight days after admission. The necropsy showed the presence of a large, firm, white, tumour-like mass occupying the mediastinum above the heart and pericardial sac. The tumour seemed by its position to have grown from the thymus gland, and microscopic examination showed it to consist chiefly of leukæmic cells, apparently of myeloblastic type. A special point of interest in the case was the presence of myeloid tissue in the hilus of each kidney.

Harrison and McKelvey (4), in their account of "A Case of Mediastinal Tumour associated with Acute Leukæmia," remark that Sternberg distinguished mediastinal leucosarcomatosis (of which their case was an example) from cases of lymphatic leukæmia with increase of cells of the small lymphocyte type and hypertrophy of the lymphatic apparatus and lymphocytic infiltration of the various organs. They add that Fraenkel thought that leucosarcomatosis was merely a variety of leukæmia in which there was a tendency to the formation of tumour-like masses of cells having the appearance of malignant growths. This, I think, was the prevailing opinion.

Quite recently, L. T. Webster (5), of the Department of Pathology, Johns Hopkins University, has analysed 123 cases of "Lymphosarcoma, Lymphatic Leukæmia, Leucosarcoma and Hodgkin's Disease," chiefly from the material of the Johns Hopkins Hospital (some described in full, with complete pathological accounts), but including several cases extracted from the scattered literature of the subject. He regards lymphadenoma or Hodgkin's disease as a distinct entity, a proliferative process of the reticulo-endothelial elements of the lymphadenoid tissue—to be distinguished from leucosarcoma, lymphosarcoma and lymphatic leukæmia, which are proliferative processes of mononuclear cells of the white blood-cell class. He further

comes to the conclusion that leucosarcoma, lymphosarcoma and lymphatic leukæmia are different manifestations of the same disease —a disease which, according to him, is not a neoplasm, but a direct response on the part of lymphoid cells to a chemotactic influence exerted by the disease-causing agent. The presence of this agent or substance in any tissue or organ of the body produces, according to his theory, a local accumulation of lymphoid cells in that situation. A localised "lymphosarcoma" (associated with an "aleukæmic" blood-picture) might thus, under certain conditions, become generalised and associated with a blood picture of lymphoid leukæmia, and so might terminate as a case of leucosarcoma (Sternberg), which may be described as combining the features of lymphosarcoma and lymphatic leukæmia.

According to Webster the diagnosis and prognosis of the disease in its early stage may be very difficult. A "biopsy," with microscopical examination of an excised gland, can be made, but the microscopical appearances of a single gland may unfortunately resemble those found in certain types of benign lymphadenitis, accompanied by a transient so-called "infectious mononucleosis" in the circulating blood—a blood-picture which naturally suggests the presence of true lymphatic leukæmia. Evidence of amœboid activity on the part of the lymphoid cells is, he thinks, indicative of a rapidly fatal course.

In this connection I will shortly allude to the occasional danger of mistaking a lymphocytosis for lymphatic leukæmia. R. C. Cabot (6) called attention to this danger in a paper on "The Lymphocytosis of Infection" in 1913. His cases were of wound sepsis, boils and tonsillar adenitis; at least some of the cases, though connected with a streptococcal infection, might at first sight, owing to the blood picture, have been confused with lymphatic leukæmia. Fritz Marchand (7) in 1913 published a long article with elaborate references to the literature of the subject on "Unusually Great Lymphocytosis following Infection." In the same year, by the way, a paper by R. von Hoesslin (8) appeared on "Lymphocytosis in Asthenic and Neuropathic Individuals and its Clinical Significance"; and in 1916 C. Moewes (9) wrote on "Chronic Lymphocytosis in the Blood-picture as a Sign of Constitutional Weakness." Very interesting was A. J. Hall's (10) "Case resembling Acute Lymphatic Leukæmia, ending in Complete Recovery," in the discussion on which at the Medical Section of the Royal Society of Medicine I was able to take part.(11) In 1918 Rudolf Deussing (12) wrote on "Diphtheria-like Sore Throats with Lymphatic Reaction," and

referred to Cabot's and other previous writings. Of considerable importance is the paper by T. P. Sprunt and F. A. Evans (13) on "Mononuclear Leucocytosis in Relation to Acute Infections (Infectious Mononucleosis)," in which the writers also review the literature of the subject, and draw attention to the suggestion of some hæmatologists that a transient leukæmia may possibly occur, from which the patient recovers spontaneously. Lymphocytosis has been noted in "glandular fever."(14) W. A. Bloedorn and J. E. Houghton (15) (Annapolis, Maryland) have described cases of what they call "Acute Benign Lymphoblastosis." The lymphatic glands, particularly of the cervical and submaxillary regions, and sometimes the spleen, were enlarged, mostly after infection of the tonsils or upper respiratory tract. All their four patients (young adults) recovered.

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THE NERVOUS CHILD.*

By Charles W. Barr, M.D.

Neurotic children may be divided into two great classes: in one, the unrestrained emotional type; in the other, the restrained emotional type. In the first, intellectual power may be, indeed usually is, above the average, but emotionally the child is a bundle

* A paper read before the Philadelphia Pediatric Society on April the 12th, 1921.

of contradictions. The young victim of a despotic nervous organisation is imaginative, often superstitious, high-spirited but timid, worried by trifles, vain, feels he is unappreciated, craves sympathy, has no idea of what discipline means, learns quickly but instantly forgets, works feverishly for a short time and then idles for days, suffers remorse but repeats the offence, affectionate, but his love is selfish. Physically such children are thin and slimly built, suffer from night-terrors and migraine; occasionally they are sickly and physically weak, and have poor vasomotor balance. As Guthrie says, many of them eventually become the main-stay of "rest houses"; a few attain great success in art. They, and especially the sickly, feed the army of the hysterics and neurasthenics in mature life. Insanity often closes the long melodrama.

Children of the second type have strong emotions, but try to hide all signs of feeling. They are observant and intelligent, but so reticent that they are often thought to be dull, sullen and obstinate. They are sensitive, shy and proud. They yearn for affection but are too shy to show it, they brood over imaginary slights, they misinterpret the conduct of others, and being suspicious, are unresponsive to overtures. They are solitary, introspective, have occasional outbursts of anger, phobias, pass through periods of religious experiences and possess no sense of humour. They are prone at the best to become incurable sexual neurasthenics, hypochondriacs, mischief-making spinsters, or cross-grained and useless old bachelors; at the worst they may become delusional lunatics and may murder supposed persecutors. Few of them attain distinction in any work worth while, though they may in manhood be industrious in a commonplace way.

Many children of both types show at times some physical sign of nervous disease. They are prone to be peevish infants, to have outbursts of infantile anger without physical cause; at seven to ten years they may develop tics (so called habit-spasms). They are sometimes spasmophiliacs, prone to diseases characterised by spasms; cyclical vomiting and asthma are very common. On a mixed diet their likes and dislikes for certain foods are marked, and finding food suited to them is a serious problem. Because of peculiarities in their bodily chemistry they crave certain articles, and since all sensory stimuli cause in them an associatied emotional tone much stronger than in the average child, the colour, smell, consistency and general appearance of anything offered them to eat causes much more pleasure or disgust than in the healthy youngster who cares only for taste and smell. They are often stammerers.

Children of both types are victims of an abnormality in personality; their disease is one of personality. They present three problems for study: On what does personality depend? What are the causes of abnormality of personality? What can be done to make the abnormal personality normal? Personality is the thing which differentiates every human being psychologically from all others; it is the sum of his intellectual ability, his moral sense, and his emotions. Scientifically, personality depends upon the individual peculiarities of the anatomical make-up and physiological working of the human machine; it is the result of the working and interworking of all the organs and systems of the body. The brain is the great organ of thought and feeling, but it can be so hurt by failure of other organs as to be thrown out of gear and made to function abnormally, though every disorder of mental function does not alter personality. The acute infectious diseases of infancy and childhood do not cause the nervous child. When they affect the brain permanently they cause idiocy or imbecility, or aphasia with hemiplegia. Acute infantile mania, which is more frequent than is commonly supposed, leads to a complete mental breakdown—not an alteration of personality, but its destruction, very early in life. The causes of the condition under discussion do not result in visible and gross destruction of brain-tissue with a corresponding abolition of function, but in perversion of function without discoverable lesions. It is not brought on by accident, prenatal disease, nor by environment, but by bad inheritance.

The fundamental factor in the formation of personality is heredity. What happens to any one stream in the human branch of the river of life (any one family) whereby new potentialities whether for evil or good arise, we do not know. We do know that characteristics acquired by the individual from without are not carried over, whether they be physical or mental. The king born with a sneak-thief's personality but never becoming a sneak-thief, because a king does not need to indulge in petty crime, will probably have a son like himself, unless inheritance be wholly from the mother, no matter what care may have been exercised in choosing the child's environment and in guiding his education. On the other hand, at times there may appear in an ordinary and commonplace family a child whose personality differs entirely from its forbears.

I do not mean those cases in which parental disease (like syphilis) infects the offspring and causes blight, nor accidents or injury to the brain at birth which may produce physical disease or mental defect, but cases in which seemingly healthy but ordinary parents conceive

a child who is a genius or a born criminal, or one of these nervous children we are discussing. There must surely be a physical cause: the explanation may be and it probably is, that while in each parent each system (brain, blood-vessels, endocrine glands and the rest) is adapted to the others, in the offspring, the combination of systems, their interrelation is bad. Knowledge at the moment seems to indicate that certain of the endocrine glands have much influence on personality. Certainly disease of the thyroid may cause mental and emotional symptoms.

The nervous child of the first type may become a great poet, musician, even having creative art, rarely a painter or sculptor. In short, he may become a great artist, but he never can become a great administrator, a great man of affairs, statesman, general, or leader among business men, or a philosophic man of science; but he may become a religious leader, especially in the ranks of heresy, schism, or false doctrine. When made on a smaller scale he may grow into a sincere Bolshevik or uplifting sociologist.

No one can draw a line and say that on the one side are all the normal and on the other the abnormal—the nervous. There is no clear-cut boundary between the healthy and the diseased, nor between the different types of disease. All types of men merge into each other. The personality may, because of inherited tendencies, be so warped and twisted that we can do nothing, or the inherent tendency towards health may be strong enough to win out, if the child be wisely managed. Our frequent error is to mistake the unbalance many boys have at puberty for degeneracy.

The treatment of the nervous child is important because he is often the starting-point of degeneracy in a family, and because much of the world's higher work in things above the material has been done by people who were certainly nervous children. It may be when we come to really know something about biological chemistry and the endocrine system in the distant future, we may be able to stabilise the emotional side of these children by medication. As nervousness depends upon emotional instability, lack of inhibition, absence of will, and enslavement to impulse, the one object of treatment is to strengthen the will, and dethrone the tyrant impulse. First, parents must change their attitude toward life, and re-learn the lesson that inhibition is the one thing in training children. Second, we must cast aside the false doctrine that to save a boy you must remove all temptation. He must be made strong to fight the battle against evil. Realise that hiding nasty truths does not make them untrue or abolish them, but that work is the one thing worth while.

Our system of trying to make education universal is fundamentally wrong because it is wasteful to prodigality; many children are incompetent to take in anything beyond the merest fundamentals, and both public money and their time are wasted in trying to make bookish people of them. Money that should be spent on intellectual boys is wasted on children whom Nature intended should work only with their hands. To hold them in school does them much harm: they want to work; the years of idleness at school destroy that desire and they become lazy. The one thing to make a boy a man is to teach him self-control, a love of truth, and a desire to work. These are important, vital things. Fortunately Nature often helps by giving the child a strong healthy potentiality to health to overcome the evil potentiality. The nervous child's anatomical apparatus should be kept in good condition, and if there be any defects therein they should be corrected or removed, but we must not expect miracles by the removal of so-called reflex causes of disease.

A CASE OF RENAL DWARFISM WITH BONY CHANGES.*

By Donald Paterson, M.B., M.R.C.P.,

Medical Registrar, Hospital for Sick Children, Great Ormond Street.

The patient, a female child, aged 4½ years, was admitted to the Hospital for Sick Children, Great Ormond Street, under Dr. Robert Hutchison on October the 19th, 1921. She had been brought to hospital because she was not getting on, and because of her deformities. She was a full-term child, and at birth it was noticed that her hands and feet were deformed by a twisting at the wrists and ankles. Her birth weight was 5 lb. She was fed on the breast until she was a year old and then on a dried food, she refused all solid food, she spoke at 18 months, sat up at 2 years but never attempted to stand. She had always been very constipated, her bowels failing to move sometimes for a week at a time. The only illness that the child has had was measles at 2½ years. The family history shows the mother and father alive and well, and two other children alive and well. There was one miscarriage after the birth of this child. *The Wassermann reaction was negative.*

On examination the child is seen to be pale. She has a large

* This case was shown before the Section for the Study of Disease in Children of the Royal Society of Medicine on October the 27th, 1921.

head for the size of her body. Her forehead is prominent, and her fontanelle measures 1 in. by ¾ in. Her intelligence is that of a child of two years. The eyelids contain small granular bodies. There are four lower and three upper incisors. The thorax is long and narrow with marked beading of the ribs, the clavicles showing exaggerated curves and Harrison's sulcus being well marked. The abdomen is full, and the liver is palpable one finger's breadth below the costal margin. The spleen and kidneys are not palpable. The

respiratory and nervous systems are normal. The circulatory system shows the following abnormalities: The blood-pressure is 95 mm. of mercury, and the radial artery seems definitely thickened beneath the finger. The vessels in the temporal region are prominent. The heart-sounds are rapid and forceful but no definite hypertrophy of the heart can be made out. Blood urea 108 mgm. per cent., normal 10 to 30.

Urine.—Specific gravity 1006–1008; pale in colour, acid; definite cloud of albumen. A few red corpuscles and pus-cells; no casts seen. Urea 1 per cent. The quantity could not be measured but we think there is polyuria.

The total length of the child is 22½ in.

Limbs.—There is defective movement at the shoulder, elbow- and knee-joints. There is thickening about the elbow-joint. At the wrist there is much enlargement and also at the ankle, and the hand and foot seem to be displaced toward the ulna and fibula respectively. The impression given is that the hand and foot have been dislocated outwards. The femora are bowed and the patellæ are displaced outward. Both hands and feet flex easily against the forearm and shin. The fingers and toes are long and slim.

X rays show marked osteoporosis. The lower end of the radius and ulna show faint stippling and much enlargement, with displacement of the wrist towards the ulna. The knee-joint shows separation of the epiphysis with displacement backwards of the lower fragment.

As regards the pathology of the bony condition, there is an overgrowth of the fibrous trabeculæ and a failure to lay down calcium and bone tissue in the trabeculæ, hence the marked tendency these cases have to displacement and fractures at the growing portions of the bone.

This case is remarkable in that the bony deformities date definitely from birth, while in the case which I reported nearly two years ago the deformities were not noted definitely until the child was a year old. The similarity of the two children in appearance is remarkable. The renal condition is in this case, I think, unmistakable, and the bone changes characteristic of these cases. How far these bony changes have been modified by the diet, which would tend to produce rickets, it is impossible to say. In conclusion I must thank Dr. Robert Hutchison for allowing me to show this case.

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A CASE OF MORBILLI BULLOSI.*

By Eva Morton, M.R.C.S., L.R.C.P.

This disease, in which an eruption resembling pemphigus is combined with the ordinary rash of measles, has been described by various authors, but is rarely seen, the following case being therefore one of unusual interest.

* The case was reported at the Section for the Study of Disease in Children of the Royal Society of Medicine on November the 25th, 1921.

The patient was a girl, aged 7½ years, with a history of measles two years ago and of varicella last June.

She was taken ill on September the 25th, the symptoms being headache and discharge from the eyes, but she went to school on the 26th. On the 28th a rash, described by the parents as "red pimples," developed over the trunk and limbs, which by the next day resembled that of measles, but with the lesions more raised and prominent than is usual in measles. There was a considerable semi-purulent discharge from the eyes. On the evening of the 29th, twenty-four hours after the first appearance of the rash, a bullous eruption developed, beginning on the chest but rapidly spreading in fresh crops to other parts of the body. On the 30th the patient was admitted to the Grove Hospital with a diagnosis of measles.

On admission there was a morbilliform rash over the whole of the body with the exception of the scalp and gluteal region. There were bullæ over the face, trunk and limbs, of all sizes up to an inch or more in diameter, many of which had ruptured, leaving the epidermis wrinkled and hanging in shreds, exposing deep red patches of true skin. The eyes were swollen, and the eyelids, completely denuded of skin, were stuck together. The lips were swollen, cracked and dry. The temperature on admission was 101°F., and the pulse 140. Rhonchi were heard over both lungs, and there was dulness at the right base, but the respiratory symptoms were slight. The heart-sounds were normal.

Next day, October the 1st, the bullous condition had extended on to the scalp and gluteal region, and the whole of the epidermis appeared to be loosened, peeling off very easily. Attempts were made to obtain blood for examination, but serum alone was exuded at each puncture, and the attempt was given up, the child being practically moribund. The urine contained albumin but was otherwise normal, the diazo reaction also being negative. The patient was semi-conscious and became very restless during the day, the pulse rising to 240, and thirty hours after admission she died.

A post-mortem examination was made, but apart from a broncho-pneumonic condition of the right lung the viscera were healthy.

The diagnosis at first appeared to lie between acute pemphigus and measles complicated by a bullous eruption, but in view of the analogous cases reported by other observers, in which measles was clearly demonstrated by the presence of Koplik's spots or otherwise, the balance of evidence lay heavily on the side of the latter diagnosis, the only points, indeed, against it being, a history of measles two years before, the fact that a younger child of eighteen months

escaped infection although in close contact with the patient for several days, and the fact of a negative diazo reaction. With regard to the first objection, while the previous illness may well have been rubella, the possibility of two or even three attacks of true measles has been placed beyond question. Lewy reported an undoubted example of two attacks of measles in the same patient, both of which—the patient being his own son—he had an opportunity of observing. M. Salzmann collected from the literature 68 cases in which a relapse or a second attack of measles occurred, in 31 of

which both attacks had been seen by the same observer. The second objection is harder to meet, but cannot be held definitely to exclude measles, while the third objection may be disposed of by the consideration that a negative diazo reaction in a moribund case is hardly likely to have the same evidential value as would a positive reaction.

Among the other cases of measles complicated by acute pemphigus recorded in the literature are the four occurring in one family, reported by Steiner—the only such cases met with by him in over 6000 cases of measles. A girl, aged 6 years, developed a rash not typically morbilliform but diagnosed as measles, bullæ developing next day,

with fresh crops appearing for a week. Ten days later rash and bullæ had disappeared, and the patient recovered. Her brother, aged 5 years, developed measles, bullæ appearing 2 days after the rash. The illness, including the prodromal stage, lasted 19 days. A 3-year-old sister developed a prodromal punctate rash followed next day by the simultaneous appearance of a typical morbilliform rash and large bullæ on face and neck, the illness lasting 13 days. The day before the final disappearance of rash and bullæ in the first child the baby of 10 months developed a maculo-papular rash on the back, preceded by a few hours by bullæ, this case proving fatal on the seventh day.

Baginsky reports two cases of *morbilli bullosi*, one in a child aged 11 months, in which the bullæ appeared 4 days after the exanthem, and the other in a patient aged 1½ years, in which the pemphigoid eruption, beginning on the back, developed 2 days before the morbilliform rash. In both these cases there was a positive diazo reaction, and both proved fatal.

The cases, however, bearing the closest resemblance to the one now reported are recorded by Henoch and F. C. Neff. Henoch's case was that of a girl, aged 4 years, with an apparently normal attack of measles, in whom on the third day an eruption of bullæ appeared over the whole body, varying in size from a hazel-nut to half-a-crown. Pneumonia of the right lower lobe supervened, the child dying on the eighth day. Neff's patient, a girl, aged 6 years, died on the fifth day of measles with a bullous eruption involving nearly the whole of the body surface. This he believes to be the only case of the kind observed in America.

A recent writer, Heinmüller, Assistant at the Göttingen University Children's Clinic, reporting an epidemic of 37 cases of pemphigus which occurred in Göttingen in 1915, notes that in six cases the disease was associated with measles, in five of which the attack of pemphigus occurred in the desquamating stage and in one in the prodromal stage. In this connection he points out that if the pemphigoid eruption in these and similar cases depends on the same ætiology as measles, it should be associated with a definite stage of the disease, or at least appear with some regularity. This, however, was not so, either in his own cases or in those recorded previously, while the appearance of the bullous eruption in some instances before any measles rash is presumptive evidence that the former is not merely a variation of the measles eruption. In view, moreover, of the fact that the combination of morbilli and pemphigus occurred in the course of an epidemic of pemphigus, Heinmüller is led to the

conclusion that the combination is a purely fortuitous one, and that the cases are therefore incorrectly described under the name of *morbilli bullosi* as indicating a distinct variety of measles. The point is no doubt arguable, and probably not until a larger number of cases have been observed and recorded can it be authoritatively settled.

I am indebted to Dr. J. H. Whitaker, Medical Superintendent of the Grove Hospital, for permission to publish the case, to Dr. Thomas Brushfield for the photograph, and to Dr. J. D. Rolleston for kindly referring me to the literature on the subject.

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Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, April the 22nd, 1921.

The President, Dr. FREDERICK LANGMEAD, *in the Chair.*

Renal Dwarfism.—Mr. C. MAX PAGE showed a girl, aged 7½ years, with an extreme degree of bony deformity resulting from displacement of the epiphyses of the femora. Skiagrams of all the long bones showed changes at the epiphyses generally regarded as characteristic of adolescent rickets. A faint cloud of albumin was sometimes found in the urine on boiling. Estimations of renal efficiency showed that the excretory power of the kidneys was very low and indicated nephritis of the chronic interstitial form.

A Case for Diagnosis.—Mr. G. S. TROWER showed a boy, aged 6 years, in whom sclerodermia was distributed in patches and was especially evident on the upper part of the back and neck. Neighbouring muscles were also infiltrated and nerve contraction and relaxation were considerably interfered with. Flexion of the legs had resulted and movement was greatly hampered. There was hemiatrophy of the tongue. The general health was not seriously affected, and there had been no fever apart from that associated with an attack of tonsillitis.

In the discussion Dr. Thursfield showed a girl, aged 16 years, in whom the disease was less pronounced and the muscles were not affected. There was, however, hemiatrophy of the tongue in this case also.

Congenital Heart Disease without Bruit.—Dr. F. Langmead showed a girl, aged 2 years, who had been blue and dyspnœic since birth, and clubbing of the fingers and toes was pronounced. The case was clearly one of congenital morbus cordis, but no bruit could be heard. The diagnosis was regarded as being either that of pulmonary stenosis or of transposition of the great vessels.

Congenital Heart Disease.—Dr. W. J. Pearson showed a female infant, aged 9 months, brought for treatment for "bronchitis." There was neither cyanosis nor clubbing. The liver reached one and a half finger-breadths below the costal margin and the spleen was palpable. The maximum cardiac impulse was in the fifth space just outside the nipple line. The area of impulse was large, and there was a marked thrust in the third and second left spaces, with a thrill in the second left space. A systolic bruit had its maximum in the pulmonary area and inner end of the second left space, and was also clearly heard at the apex.

The second sound in the pulmonary area was accentuated. A skiagram showed considerable enlargement of the heart with prolongation upwards to the left of the sternum. The diagnosis suggested was patent ductus arteriosus.

CLINICAL SECTION.

March the 11th, 1921.

Case of Osteitis Fibrosa treated by Resection of 4 in. of Humerus and Insertion of Boiled Beef-Bone Graft.—Mr. C. W. Gordon Bryan showed a girl, aged 10 years 9 months, in whom he had used this method, for which he claimed the following advantages: (1) It was not necessary to interfere with another of the patient's bones in order to obtain a graft. (2) The beef graft was much stronger than any autogenous graft that could have been used, and the function of the arm was fully restored in seven weeks; from that time the limb had been used normally. (3) The avoidance of prolonged immobilisation allowed the muscles and joints to recover their functions very rapidly, and after-treatment by massage, etc., was reduced to a minimum.

Case of Parovarian Cyst in a Baby, aged 3 months.—Mr. W. H. Ogilvie.—The infant had been ailing since birth, and had been treated for marasmus. After admission to hospital for broncho-pneumonia a lump was noticed in the abdomen, which was very distended and tympanitic. In the left lower quadrant was a large globular elastic swelling, dull to percussion, giving the sensation of fluid and only slightly moveable; the lower border could be felt *per rectum*. The idea of an ovarian tumour was suggested by the presence of two congenital abnormalities—a large rugose vulva like a cleft scrotum, and a partial stricture at the recto-anal junction. The previous child had been born with a hare-lip. The fixity of the mass, however, and the distension of the intestines led to the diagnosis of an inflammatory

exudate shut off between coils of intestine. Under chloroform anæsthesia a right paramedian incision was made. Greatly distended coils of gut presented, and free serous fluid was found in the peritoneal cavity. A globular swelling about 4 in. in diameter was then exposed. As it could not be delivered it was punctured with a trocar, and about 12 oz. of golden-yellow fluid evacuated. The flaccid cyst was then drawn out, its narrow pedicle clamped, divided and tied off, and the abdomen closed. The operation lasted only fifteen minutes. Recovery took place. Microscopical examination of the cyst showed a well-developed parovarium in its wall. Mr. Ogilvie stated that the chief interest lay in the rarity of the case, no example of parovarian cyst having been previously recorded in a baby.

Enlarged Spleen: Case for Diagnosis.—Dr. Bernard Myers showed a girl, aged 13 years, whose spleen and liver were increased in size, the spleen extending to 1 in. below the umbilicus. Banti's disease seemed to be negatived by the absence of hæmatemesis and ascites and by the leucocyte count. The leukæmias were excluded by the blood examination and the history. The diagnosis of acholuric jaundice, a tuberculous process and Hanot's cirrhosis was also rejected. The condition was probably syphilitic, as slight improvement took place under specific treatment. The Wassermann reaction performed by the pathologist was doubly positive, and negative when performed by two others within a few weeks of one another.

SECTION OF DERMATOLOGY.

March the 17th, 1921.

Case of Monilithrix.—Dr. W. Knowsley Sibley showed a girl, aged 5 years, the youngest of three. There was no other known case in the family of hair trouble. At birth the hair was dark brown and normal in appearance. At one month old it all came out and had never grown properly since. The hair of the head had a fair, flaxen, tow-like, bushy appearance, being 1 to 2 in. long on the vertex of the scalp, but only $\frac{1}{8}$ to $\frac{1}{4}$ in. in length over the occipital, parietal and margin of the frontal regions. The hairs were very brittle, and readily broke off at various lengths with slight friction. The eyebrows, especially the outer parts, were very deficient, and the hairs presented the same microscopical appearances as those of the head. The eyelashes were very dark and rather short and very curved. They did not present any of the monilithrix structural appearance. The whole scalp was dry and presented the appearance of keratosis pilaris, and that condition was also present on the arms and thighs. The teeth were well preserved, rather small, with considerable spaces between all the incisors and canines.

Case of Lupus Erythematosus (Juvenilis).—Dr. W. J. O'Donovan showed a boy, aged 8 years, who in June, 1920, was noticed to have a rash below the left eye which had been treated as eczema. The general health was good, there was no history of any infection except measles in early childhood, there was no albuminuria, no adenitis and no chilblains; on both cheeks and on the nose were numerous discrete discoid patches of lupus erythematosus. The extreme youth of the patient was the reason for his being shown.

April the 21st, 1921.

Case of Granuloma Annulare.—Dr. E. G. Graham Little showed a boy, aged 12 years. The lesions on the left hand were good examples of early granuloma annulare, and showed the pearly, isolated, sago-like lesions arranged in a ring. Dr. Little agreed with Darier in holding that the disease had tuberculous associations. In the present case the condition had persisted for nine or ten months; it was not involuting in any way but was inclined to appear in fresh patches on the knuckles of the left hand, those on the right hand having been first affected.

A Condition somewhat resembling Lupus Pernio in a Child.—Dr. Parkes Weber showed a boy, aged 2½ years, who had previously been exhibited by Dr. Cockayne as a case of sclerodactylia (*vide* British Journal of Children's Diseases, 1920, xvii, p. 93). He had at first agreed with this diagnosis, but afterwards, in spite of the patients' early age, he thought it was allied to lupus erythematosus, and Dr. Adamson suggested that it more nearly resembled lupus pernio.

May the 19th, 1921.

Case of Adenoma Sebaceum.—Dr. E. G. Graham Little showed a girl, aged 13 years, who had had the eruption since early childhood, and at present the characteristic semi-translucent small tumours were thickly distributed about the cheeks, in the sulcus between the cheek and nose, and on the nose. The majority of the lesions were of the red type (type Pringle), but there were also some quite pale tumours (Balzer's type). In addition there were several soft, fibrous, pad-like colourless patches on the skin over the sacrum. The child was a particularly bright, clean and successful student; there were three other children who were normal.

Case of Congenital Hypertrichosis.—Dr. J. H. Sequeira showed a girl, aged 2½ years, the youngest of five. The older children had no abnormality. The child was born at full term, the first teeth appeared at 8 months, and she walked at 18 months. The face was covered with fine downy hair, chiefly fair, in some parts ¼ in. in length. The body was covered with longer, darker hair, and there was a similar growth on the limbs. The palms and soles and the flexures were free. In 1909 Dr. Sequeira had shown a similar case.

Case of Epidermolysis Bullosa.—Dr. H. W. Barber.—The patient was a boy, aged 9 years. Twenty-two affected members of the family had been traced. In the present generation two boys and two girls were affected, and the disease had been transmitted to them by the father, from whom it went back to the grandmother's father.

SECTION OF LARYNGOLOGY.

June the 3rd, 1921.

Foreign Body (Collar-Stud) in the Œsophagus of an Infant, causing Spinal Osteomyelitis and Death.—Dr. Douglas Guthrie.—A previously healthy infant, aged 9 months, with no history of foreign body

was admitted to hospital presumably suffering from broncho-pneumonia. For a few days there was improvement, but when seen by Dr. Guthrie ten days later the patient looked very ill, had a metallic cough, and the temperature was 102° F. Physical signs in the chest consisted only of a few scattered moist *râles*, and a wheezing sound audible on expiration (Jackson's sign). No difficulty in swallowing had been observed. X-ray screen examination showed a small dense shadow, slightly to the left of the middle line, at the level of the tracheal bifurcation; above this was a diffuse shadow extending towards the apex of the right lung. Whilst the larynx was being examined by direct laryngoscopy and mucus being mopped up (without an anæsthetic, general or local), the pulse and respiration suddenly ceased. Immediate tracheotomy followed by bronchoscopic insufflation was of no avail. The autopsy revealed a large bone stud in the œsophagus, just above the level of the tracheal bifurcation. The base of the stud was in the œsophagus, while the head had ulcerated through the posterior wall and projected into an abscess, the size of a walnut, which occupied the body of the third dorsal vertebra. Only a thin lamina of bone separated the abscess-cavity from the spinal canal, and at this point there was localised inflammation of the meninges. Abscess of the posterior mediastinum following a foreign body in the œsophagus was not uncommon, but Dr. Guthrie was not aware of any other case in which the vertebral column became eroded to such an extent. He thought the cause of death was shock in an emaciated child. Possibly there had been some pressure on the spinal cord, as the entire body of the third dorsal vertebra had been converted into an abscess, into which the small end of the collar-stud projected.

Philadelphia Pediatric Society.

April the 12th, 1921.

Edward B. Hodge, M.D., *in the Chair.*

The Origins of Fears and Obsessions in Children and their Influence in Later Life.—Dr. William Drayton, jun., read this paper, in which he said that probably the first instinct to become manifest was that of self-preservation, and fear was the emotion that seemed to play the major *rôle* in connection with this instinct. As a child developed mentally he was subjected to many emotions—fear, awe, terror, shame, jealousy, anger and so on—and if any of these emotions were successfuly played upon, that emotion was likely to become more or less dominant and overshadow the reaction of the other emotions: for instance, if fear were constantly called upon and unduly stressed by continual threats, that particular child would react to fear when perhaps anger or shame should be the natural response. The emotions not being evenly balanced, the child might develop the neuropathic or psychopathic constitution; this, of course, was largely in the realm of theory, but nevertheless was worthy of serious consideration.

Phobias and obsessions developed in infancy and early childhood frequently played a large part in later mental development, perhaps colouring the whole

mental life of the individual. The suffering of a victim of a phobia or dread was rarely suspected: the child would endeavour to hide his fear, as it was often accompanied by shame and the dread of ridicule from misunderstanding elders unless it became so overpowering that he must confess it. They had all seen children exhibit great fear at the crash of thunder, the bark of a dog, the howling of the wind, the splash of rain against the roof or window, the morbid fears of snakes, insects, cats and dogs, and they had heard parents and nurses laugh at these childish fears and ridicule them, or punish them for what parents considered acts of cowardice; but rarely did they see parents and nurses try to discover the causes of these fears and explain them away in a rational manner. The result was that some of these phobias persisted through life and caused great misery to the individual. He cited many cases showing that the fears, dreads or obsessions began from origins developed in childhood, and urged those dealing with children to help prevent the development of these fear processes. Dr. Drayton felt that the best way to accomplish this was by educating the medical student along psychological lines, so that when the time came he would be better fitted to instruct parents, nurses and caretakers not to threaten children with fears, nor to play upon their jealousy, shame or other emotions; furthermore, by careful and painstaking study of childish fears and dreads, by gaining the child's confidence and never ridiculing his fears or doubts, they could try to determine their origin, then by explaining to the child just why he or she was terrified help him or her to overcome their terror. After the patient realised how his suffering had been caused nothing was more satisfactory than to see the phobia disappear, as it almost always did when the true cause was found and explained to the sufferer.

Psychoses and Potential Psychoses in Childhood.—Dr. Edward A. Strecker called attention to the extreme rarity of true mental disease in children. In reviewing 5000 consecutive hospital admissions, only eighteen instances of undoubted psychoses in children under the age of fifteen years were found. Ten were girls and eight were boys. The type of mental disease was doubtful in four, in ten the final diagnosis was manic-depressive psychosis. In seven of these the depressive element was more pronounced and in only one was there frank mania. He did not include post-infectious mental disease, juvenile paresis, psychoses in epileptics and mentally defectives, psychoneurotics or constitutional psychopaths. Dementia præcox was carefully searched for and only four examples were found. This disease had its greatest incidence at puberty or soon thereafter, and many endocrine anomalies and disorders had been noted in the fully developed and chronic stages of the psychosis, which would seem to indicate a clue too significant to be overlooked in future attempts to uncover hidden ætiology. The ages of incidence in the manic-depressive group were as follows: one at ten, three at twelve, one at thirteen and five at fourteen. In dementia præcox the age at onset was eleven and fourteen in the male children and eleven and thirteen in the females.

He cited one case of dementia præcox in which the patient's heredity was heavily charged. The father had melancholia, and a paternal uncle and cousin were mentally sick during the greater part of their lives. The child was bright and precocious. Coincident with the establishment of the menses at thirteen she became irritable, seclusive, depressed, and made two dramatically planned attempts to end her life. A brief remission was followed by rapidly progressing and final deep dementia. There were hallucinations of

hearing, silliness, vague ideas of reference, delusions of persecution, untidiness, and frequent outbreaks of catatonic excitement, during which she blindly and desperately attempted to injure everyone in her vicinity. At the present time in the fourteenth year of the disease at the age of twenty-seven she was hopelessly demented.

Dr. Strecker said that the symptomatology of mental disease was relatively more simple in children than in adults. In the manic-depressive group the depression was often nothing more than an elementary emotional reaction, or else it was supported by vague and trivial delusional formation. In only one patient was the idea of personal wrong-doing and self-depreciation expressed comprehensively and more or less logically. The psycho-motor activity was seemingly more motor than psychic, and the distractability and the flight of ideas was apparently closely related to the contents of the environment. Mental confusion occurred frequently. In dementia præcox delusions were usually of uncomplicated construction. The more complex differentiation of the central nervous system was the final acquisition of the child. A structure or an organ which had not reached its maximum growth was unable to respond by complete functional expression to either physiological stimulation or pathological irritation. Among primitive races mental disease, especially dementia præcox, was uniformly simple in its clinical expression.

Between 10 and 30 per cent. of psychoses in children were due to acute infectious and contagious diseases, especially the exanthemata, mental episodes having been reported after scarlet fever diphtheria and such diseases. During the course of the acute illness a varying grade of delirium might be expected, and subsequently an unmotive excitement or depression with considerable confusion often without hallucinations and delusions. After epidemic encephalitis children became impulsive, and showed purposeless motor acts, marked irritability, attention disorders, distractability, an inconsistent, variable and unstable emotional reaction, marked insomnia, and occasionally intense eroticism and precocious sexual feelings.

To judge from the case-histories of adults with mental disease, there was often in childhood a predisposition which was expressed in terms of abnormal "make-up." He described the "shut-in" type of personality not uncommonly met in children. These children, as Dr. Burr once aptly wrote, were a curious combination of child and adult; intellectually they were often precocious, they were not boisterous, vivacious nor unduly inquisitive, but showed a passive resistance to their environment. They did not enjoy play with other children, were much alone, did not confide their thoughts to others—not even to their parents. They were unduly sensitive, often absent-minded and dreamy. On such a basis they might develop seclusiveness and gradual withdrawal from practically all human contacts. This was essentially dementia præcox, the pre-eminent psychosis of adolescence. Some children showed an undue amount of emotional instability, often with pronounced moodiness and sulkiness. There were some intellectual children who presented almost constant and uncontrollable motor restlessness, which, if accompanied by corresponding mental hyper-activity, would be equivalent to true mania.

The pædiatrician had the unusual opportunity of studying and sometimes controlling the environmental factors of childhood. In the early years of life there was an effort on the part of the child to dominate its immediate surroundings. When the path of least resistance was followed by the

parents the outcome was a spoiled child. When the opposite extreme method was used they might expect a repressed child with a crushed spirit, either vindictive or lacking in initiative and courage; what was needed was a reasonable, middle-of-the-road course. Childish curiosity, and especially their sexual curiosity, needed to be taken seriously. If denied by the parents or physicians, the desired information would soon be supplied by questionable sources which might prove highly dangerous. Children were individuals with their own point of view, and the adult conception might be totally inexplicable and seemingly inadequate to their youthful minds. Certain traits needed to be encouraged and others discouraged, if the child was to reach the apex of its inherited and developmental possibilities.

The Nervous Child.—Dr. Charles W. Barr (*vide* p. 182).

May the 10th, 1921.

Edward B. Hodge, M.D., *in the Chair.*

Medical Supervision of the Destitute Child.—Dr. Maynard Ladd, of Boston, described the method employed in Boston for managing the problem of the destitute child. He gave substantial evidence that the medical supervision of the boarded-out child must be one of the first and most important considerations of any child-placing associations.

Dr. Ladd said that five years ago Mr. J. Prentice Murphy, who was then Secretary of the Boston Children's Aid Society, came to the conclusion that the medical supervision of the children boarded out by the Society was in many ways inadequate. In short the social end of the job was scientifically and efficiently managed, but the medical supervision of the children from a physician's point of view was very inadequate, if not actually bad. The problem which had to be worked out was how to establish an organisation which would assume the medical supervision of the children, correlate the social end of the job and provide proper hospital facilities for those who became seriously ill. The expense of such an organisation was of primary importance. The only solution appeared to be in utilising the facilities of a large hospital, and so to arrange the work that it would not conflict with its regular service. Thanks to the co-operation and spirit of Mr. Michael M. Davis, then Director, the Boston Dispensary was selected for the experiment, and the Chief of the Children's Department assumed the medical directorship of the Boston Children's Aid Society and of The Church Home Society. This arrangement had obvious advantages. It centralised the medical care under one responsible head, who by virtue of his connection with the dispensary was able to secure the co-operation of the different departments. Quarters were set aside for a preventive clinic with its own corps of workers. The facilities of the clinical laboratory, the X-ray laboratory and the special departments, such as the eye, ear, nose and throat, gynæcological and orthopædic, were made available without prohibitive overhead expense. The hospital became the natural centre for seriously ill children, thus relieving the foster-mothers and social visitors of responsibilities they should not be forced to assume. In care of contagious diseases the special hospitals were utilised, but their co-operation was more easily obtained from an organised department of the dispensary than by the individual efforts of the agencies, and it not infrequently happened that their favours were returned when they had to face the problem of providing for a convalescent child.

The general offices of the two children's societies were located outside of the dispensary building and were concerned with social, financial and administrative details of their work. With them rested the selection of cases, the study and social diagnosis of families, the preparation of histories of children received, the selection of foster homes, the supervision and training of foster parents, the selection and training of non-medical workers, the social case work supervision of the medical workers, the provision and distribution of special foods, and so on, which as a result of their own observation or that of the medical director were found to be necessary. The general current of all social case-work of these two societies was determined by the advice and counsel of the medical director, who practically determined the final disposition of the children.

The preventive clinic at the dispensary was under the control of the medical director of the two societies, whose duties were those of a consultant, and who also directed, as his particular charge, the feeding of infants and under-nourished children. The routine examinations and home visits were largely made by a full-time physician—at present Dr. Leslie H. Macmillan. Her mornings were spent at the dispensary making first examinations and re-examinations; her afternoons in visiting children in their homes who had been reported ill by the visiting nurse or social worker, but not ill enough to necessitate hospital care. Both societies had trained graduate registered nurses for the medical social supervision and training of all their children under the age of three.

Notes on all examinations were made in triplicate. One copy went to the society responsible for the child, one to the dispensary general files for the benefit of other clinics, and the third was kept on file in the preventive clinic office. The central office was thus informed automatically of everything that transpired in the hospital clinics. The assistant physician visited each home every month or two and represented a definite medical survey, and resulted in information of great importance for the social case-workers who were operating from the offices of the respective societies. All cases of illness were immediately reported to the central office from which the child was placed. The office then promptly notified the director or his assistant.

The Boston Children's Aid Society had constantly 60 to 100 infants under its care, and a smaller number in the care of the Church Home Society. Very few of these babies had mothers to nurse them and they required experience and judgment in the matter of substitute feeding. Following the initial examination at the time of acceptance, the details of the child's feeding were carefully formulated. The nurse visited each home once or twice each weak, examined and weighed the baby, plotted its weight curve on a chart, detailed the hygiene and preparation of the feedings with the foster-mother. Once a week the nurses met the director in conference. Each case was carefully reviewed and changes made in food and the nurse instructed in the principles underlying the changes. The foster-mothers were always in telephone communication with the nurses. Any unfavourable symptom was reported and the nurse visited the child, gave instructions herself to the foster-mother if the condition was not serious; otherwise she reported the case to the assistant physician, who visited the child. If in her judgment it was necessary she reported to the director, and he either prescribed treatment or ordered the child to the clinic for examination, or arranged for its admission to the hospital. The results of this close supervision were seen in the low mortality-rate, and in the almost normal development of the babies, even though bottle-fed. The educational value of such a

system of supervision upon the foster-mothers, the social worker, nurse and doctor was very valuable, and pointed the way by which large groups of destitute babies could be successfully reared without institutional care, with minimum expense, and with a comparatively simple organisation.

Dr. Ladd showed many interesting slides, two of which were especially interesting. One showed the total number of individual patients carried in the four-year period from 1916–1920 was 1127, representing about 530 cases carried each year. The total number of deaths in the four years was 24—an average of 6 deaths per year. This represented a mortality of 2·12 per cent. for a yearly average of 282 new patients, or 1·13 per cent. for an average of 530 patients carried each year. The children ranged from birth to sixteen years of age.

The other slide showed the mortality by age for the four-year period.

			Mortality.
Birth to 1 year . .	302 cases .	9 deaths .	3·0 per cent.
1 to 2 years . .	157 ,, .	9 ,, .	5·7 ,,
2 ,, 5 ,, (incl.) .	336 ,, .	3 ,, .	0·9 ,,
6 ,, 10 ,, ,, .	336 ,, .	0 ,, .	0·0 ,,
11 ,, 16 ,, ,, .	290 ,, .	3 ,, .	1·0 ,,

The Social Significance of Medical Work for Dependent and Neglected Children.—Mr. J. Prentice Murphy, Secretary of the Philadelphia Children's Bureau, said that approximately 50,000 children received some form of foster care in Pennylvania each year. The average in such care for the whole United States was about 200,000 children, with approximately 500,000 children reached in some way each year.

During the administration of the late Mayor Mitchell, of New York City, an inquiry was made into the keeping given to the thousands of needy children in care of various private subsidised institutions in New York City. Although all of these institutions carried the names of physicians in their reports, the actual health work done by approximately half of the institutions was so poor as to lead to a severe condemnation by the Mayor's Committee. There were superficial examinations that revealed little besides figures for reports; the medical part of the child-caring job was purely incidental with nothing essentially preventive or constructive in its character; in some institutions children never had a properly balanced meal and were tied up with one quarantine after another, children were assigned tasks out of all proportion to their physical strength, and little was done to correct or remove physical defects and handicaps, which when once crystallised meant almost permanent dependency for the child.

In one of the largest cities in the country there was a great system of foster care for children passing through the juvenile court. These children were placed in families under the direct supervision of the court, but without adequate health oversight; the cost of their maintenance was close to $400.00 per child per year. According to the last report, more than 700 children were being cared for in 70 families—an average of 10 children to a family. This large number of children had not and was not now getting the medical oversight which their needs demanded and were frequently more harmed than benefited, although many of them presumably had been removed in the first instance because their own homes were unsatisfactory.

In another city, until very recently, a thousand children a year passed through a co-operative medical organisation, but in spite of a wealth of

medical resources in the community every child received into care was subjected to a long list of physical dangers. There were misfeeding, underfeeding, overcrowding, improper clothing, improper sleeping facilities, exposure to various infections, inadequate and insufficient control as to personal hygiene over a period of six or seven years, so that child after child had registered against it in the name of charity a list of ills from which he had a difficult or impossible time to escape or recover. This association's reports indicated that they were doing effective medical work, yet by no possible stretch of the imagination could this be honestly claimed. The responsibility for this situation rested almost entirely with the directors and officers of the agencies. Direct medical control had never been voted to the physicians whose services were being sought, and of course they were powerless when it came to forcing a change. The social influence of the directors of these agencies was such as to make criticism a task not lightly to be attempted, and because of this fear many children were injured.

Mr. Murphy cited many other instances where social agencies and child-welfare organisations neglected or ignored true medical supervision, yet professed to be doing much for the children under their care. He advocated medical opinion to bring about a good law covering the foster care of babies under three years of age. He believed much of the poor medical work was due to short-sightedness of the agencies in question, and in part to a disinclination of the physician to assert what he felt were minimum standards. Good medical work toned up all the work of a children's agency. The physician should be the final judge in every question of vocational choice, the meaning of some act of misconduct, the return of a child to its home, and innumerable kindred questions.

Malnutrition and its Treatment by the Class Method.—Dr. John D. Donnelly pointed out that the primary object of a nutritional clinic was to recognise, sort out and care for physically and mentally subnormal children. In each instance a diagnosis should be made based upon physical, mental and social examinations. He used Dr. Emerson's table of weights as a weight standard. He insisted upon the necessity of careful and complete history-taking. Aside from physical defects and points of infection, the children in his clinic as a class presented the picture of over-fatigue. It was common to find in their histories that they were subject to frequent colds, attacks of tonsillitis, and that "all bad colds developed into bronchitis." As a class they revealed an absence of any definite daily routine in life, a fair number were backward in school, and a few were the victims of poor home training. All of them were over-active, most of them received wholesome food in sufficient quantities.

There were certain social factors which bore directly or indirectly upon the underlying causes of malnutrition in some children, viz. poor housing conditions, poverty, filth, lack of personal hygiene, high cost of simple foods, no wage-earner in the family or the wage-earner incapacitated through illness, and last but not least, those homes in which the widowed or deserted mother absented herself all day while she tried to support her family.

Dr. Emerson, of Boston, was the first to demonstrate what could be accomplished among these children by the class method of study and treatment. All physical defects and faulty habits interfering with physiological functions and nutrition must be removed. All sources of infection must be cleaned out or removed. The children should be submitted to a routine

eye, ear, nose and throat and dental examination, and where indicated an X-ray study of the chest and abdomen should be made. Special studies and laboratory work should be done when indicated. The next thing was to secure the whole-hearted co-operation of the parents—and at times of the entire family.

He laid special emphasis upon the close association of fatigue and malnutrition and the urgent need of rest for these children. The best results were obtained by complete rest in bed for one or two hours daily, usually in the late afternoon, and the child put to bed not later than 8 p.m., being permitted to remain there till 8 a.m next morning. Should it be necessary to remove the child from school so as to ensure the required rest this should be done, as restoration to health took precedent over education. Their diets should be well balanced, averaging 3500 to 4000 calories per day. Daily lunches taken to school aided greatly in increasing their diets. Obviously children under weight required more calories than those of average weight and the appetite of the average growing child was at times quite large.

Dr. Donnelly showed charts of some of the children, illustrating the return to normal weight and increased resistance to infection when the underlying faults were recognised and removed. There were also charts of children presenting medical and social problems. One of these charts demonstrated what could be accomplished by proper foster care: the agency responsible for that particular child co-operated with the clinic and placed her in a home where she had an environment similar to the average real home and under medical supervision; she had to date made the best record in class, the best record among some sixty children, the majority of which lived with their parents in good homes.

Société de Pédiatrie, Paris.

February the 15th, 1921.

Acute Encephalitis in Children.—M. J. Comby stated that in the course of fifteen years he had observed 62 cases of epidemic encephalitis, sporadic or epidemic, primary or secondary, in children aged from 1½ months upwards. Apart from epidemic encephalitis, the causes of the condition were, in order of frequency—influenza, enteritis, whooping-cough, congenital syphilis, measles, vaccination, gastric disturbance, falls on the head, otitis, carbon dioxide poisoning. Twenty-seven were in males and 35 in females. In 32 cases the onset was sudden. When the encephalitis was secondary to an infectious disease the invasion might be insidious and even escape notice. Spasms, contractures and rigidity were noted in a large number of cases. The eyes were frequently involved, as was shown by ptosis, strabismus, mydriasis, diplopia, nystagmus and conjugate deviation. Optic neuritis with subsequent blindness was seen in 2 cases. Aphasia and mutism were occasionally seen. Transient or persistent paralysis was more frequent, spastic hemiplegia being observed in 8 cases on the right side and in 8 cases on the left side. Brachial monoplegia occurred in 1 case, paraplegia in 5 cases, facial paralysis in 7 cases and vesical paralysis

in 1 case. Myoclonic manifestations were frequent, especially during the epidemic encephalitis of the last three years. Lethargy was less common than insomnia. Fever was very variable. There was often apyrexia or only a moderate rise of temperature, but in a few cases the temperature was as high as 105·8° F. The acute stage might be followed by psychical or motor disturbances, such as dementia præcox, backwardness, loss of memory, epilepsy, spastic paralysis and athetosis. The prognosis was less severe in children than in adults. Six of the 62 cases died—a mortality of 9·60 per cent. Recovery without sequelæ took place in 20 per cent., and with sequelæ in over 66 per cent. Treatment could only be symptomatic and palliative, and consisted in application of ice-bags to the head, blisters to the back of the neck, purgatives and enemas. M. Comby regarded fixation abscesses as barbarous and useless.

March the 15th, 1921.

Parkinsonian Syndromes following Lethargic Encephalitis.—M. P. Lereboullet reported two examples of this condition. The first was in a boy, aged 16 years, who a year after the attack of encephalitis presented psychical inertia and slight tremor. The second case was that of a boy, aged 12 years, who showed a general rigidity of the Parkinsonian type without tremor, but with some mental fatigue, difficulty of attention, rapid fatigue on walking and exaggeration of the reflexes.

Neuralgia and Contracture of the Neck due to Spina Bifida Occulta of the Cervical Vertebræ.—M. Lance showed a girl, aged 10 years, who had been complaining for two years of pain in the right shoulder. Examination showed cutaneous hyperæsthesia and tenderness on pressure over the lower branches of the right superficial cervical plexus, right side of the neck, scapular region, shoulder and chest half-way to the nipple. There was contracture of the trapezius and sterno-mastoid, causing elevation of the right scapula and shoulder. X rays showed spina bifida of the third and fifth cervical vertebræ, and in a less marked degree of the fourth cervical vertebra. On electrical examination the excitability of the right trapezius and sterno-mastoid was diminished for the faradic current and increased for the galvanic current as compared with the opposite side. The neuralgia and contractures of the trapezius and sterno-mastoid were probably due to traction caused by adhesions of the cord and its roots at the site of the spina bifida.

Operations for Temporo-maxillary Ankylosis.—MM. L. Dufourmentel and M. Darsissac reported two cases showing that surgical treatment of temporo-maxillary ankylosis is liable to be followed by a rapid relapse if continuous mobilisation is not employed. The apparatus invented by M. Darsissac by which this was effected was described. The speakers pointed out that ankylosis in children rapidly caused an arrest of development of the lower jaw, which rendered the treatment still more necessary and urgent than in the adult.

Hirschsprung's Syndrome in a Child, aged 3½ years.—MM. G. L. Hallez and Blechmann, who showed this case, remarked that it had been conclusively proved that all the clinical and anatomical signs of so-called congenital and idiopathic dilatation of the colon may occur in the acquired affection due to mechanical causes. The present case was that of a hitherto

healthy boy who, at the age of 3½ years, began to suffer from obstinate constipation, which he had never had in infancy. X-ray examination showed enormous dilatation of the large intestine with elongation of the ilio-pelvic colon, which extended well above the pelvis with a sharp curve towards the right. Considerable improvement took place under purely medical treatment, consisting of oil enemata and a mixture containing sulphate, phosphate and bicarbonate of soda, for which two teaspoonfuls of vaseline were substituted later.

Erythrodermia Desquamativa.—MM. G. Blechmann and Hallez showed a severe case of Moussous-Leiner's disease in a child, aged 7 months, in whom various methods of treatment had been unsuccessfully applied until subcutaneous injections of mother's milk were employed, when increase of weight and progressive recovery took place.

Generalised Exfoliative Erythrodermia.—MM. E. Cassoute and P. Vigne, of Marseilles, reported a case in an infant, who, ten days after birth, presented a very marked erythema on the buttocks. The lesions rapidly spread, and in three weeks involved all the skin except that of the palms and soles. The skin was dark red and covered by desquamating patches, the condition being most marked on the abdomen, face and scalp. The general condition was not serious and there was no fever. Recovery took place under simple local applications.

The Lesions of the Connective Tissue in the Nephritis of Choleriform Diarrhœa.—M. H. Sloboziano, of Bucharest, made a histological examination of the kidneys in eight cases of choleriform diarrhœa, and found, besides the well-known lesions of the renal parenchyma, a considerable reaction of the connective tissue. A granulo-fatty degeneration of the secreting epithelium and lesions of hyperæmia were marked in almost all the cases. A proliferative process was constantly found in all, and was very marked in two. The toxin of choleriform diarrhœa may therefore give rise to a mixed nephritis, in which, in addition to degenerative lesions of the secreting cells of the kidney, an acute glomerulitis occurs and a cellular infiltration of the tissue surrounding the straight tubules.

Digestive Leucocytosis in the Child.—MM. Lesné and Langle, as the result of ninety-five examinations, came to the following conclusions: (1) The cause of digestive leucocytosis in the child is very variable, and it is very difficult to lay down a precise law applicable to all cases. (2) The previous ingestion of peptone has an inhibitory action on leucopenia, probably by modifying the colloid state of the blood. (3) Excess of sugar in the milk has a similar influence, and acts by stimulating the hepatic functions. (4) Digestive leucocytosis differs in the breast-fed and in the bottle-fed baby. The homogeneous albumin of the mother's milk is better tolerated than the heterogeneous albumin of cow's milk—a further argument, if one were needed, in favour of maternal feeding. (5) In hypotrophic children leucopenia is constant even after ingestion of very small quantities of milk. It is also found in infective purpura and malignant diphtheria, and is invariable in the serum disease.

A Case of Asthma in a Non-tuberculous Child.—M. G. Salès reported a case in a boy, aged 8½ years, who had typical attacks of asthma with an eosinophilia of 10 per cent. and without any trace of tuberculosis.

There were no enlarged glands, no signs of tracheo-bronchial adenopathy, and no induration of the apices. The cuti- and intra-dermo reactions were negative.

A Case of Acute Meningitis due to Pfeiffer's Bacillus.—MM. Richardière and G. Salès reported a fatal case in a male infant, aged 4 months. Unlike most of the cases which showed other manifestations of influenza, the meningitis was primary and there was no history of exposure to influenza. Lumbar puncture and puncture through the external angle of the anterior fontanelle showed that the meningitis was cerebro-spinal. The cerebro-spinal fluid was purulent, and contained a large quantity of Pfeiffer's bacilli. Immediately after being withdrawn the fluid formed a very thick clot surmounted by a layer of clear fluid, as the speakers had found in another case of Pfeiffer's meningitis.

Abstracts from Current Literature.

Diseases of the Nervous System.

Familial spastic paraplegia (*'La Pediatria,'* 1920, xxviii, *p.* 893).—**S. de Stefano** gives details of five cases observed by him. In one family, however, four members were affected and in the other three, bringing into prominence the essential familial character of the disease. The symptomatology showed remarkable uniformity, constituting a well-defined clinical form of the three cases of the second family, all of whom were under clinical observation: in the first the intelligence was well preserved, in the second slightly dull, while in the third there was a definite condition of idiocy with muttering and dribbling of saliva; in the first there was galvanic hyperexcitability only in the lower limbs, in the second in the upper limbs, while in the third there was slight paresis of the upper limbs and right side of the face. These small variations are merely different stages of the same disease, and must be interpreted as the index of a greater or less extension of the pathological process in relation to the beginning and course of the malady, and do not justify the various subdivisions described by various observers. The onset may take place at any age: in the cases reported it was observed to occur at 16 months, $2\frac{1}{2}$ years, and at 4, 5, and 6 years of age. In all five there was syphilitic infection, either shown by the Wassermann reaction or confessed to by the parents.

Vincent Dickinson.

Clinical types of convulsive seizures in very young babies (*'Brit. Med. Journ.,'* 1921, ii, *p.* 679).—**John Thomson.**—In 37 out of 200 the fits were due to birth injury and in 29 occurred in the first three days after delivery. The diagnosis is confirmed by a bulging fontanelle and blood-stained cerebro-spinal fluid. Cerebral hæmorrhage is ten times as common after breech as after vertex presentations. One of the commonest lesions in stillborn children is tearing of the dura mater, which occurs sixteen times more frequently in breech than in vertex presentations. In vertex cases tentorial tears were found chiefly after difficult forceps cases. Prematurity is a serious cause of cerebral hæmorrhage and is due to over-

filling and bursting of the cranial veins. It is seven times commoner in breech than in vertex cases. Breech cases must be avoided by cephalic version between the seventh and eighth month of pregnancy. Many cases recover, but there may be instability or mental defect or epilepsy. Spastic rigidity may develop. In 7 per cent. of 200 the fits were due to meningitis; 6 of these died, and 1 recovered with hydrocephalus. There were 4 other cases of internal hydrocephalus: 2 died in infancy, 2 survived, one being idiotic and the other feeble-minded. In 18 (5 boys and 13 girls) there was congenital defect with *petit mal* attacks. The seizure consists in a sudden jerk forward of the head and shoulders with the arms extended and somewhat adducted and pronated. Consciousness is lost for a few seconds. Gradually the attacks are replaced by true epilepsy, and mental deterioration continues until the child is idiotic. Indigestion accounted for 46 of the 200 cases. Such fits are common in pyloric stenosis where there is dilatation of the stomach and retention of the decomposing food. In 2 there was profound jaundice, due in one to congenital obliteration of the bile-ducts. In 1 the fits were due to phimosis, in 2 to concentrated acid urine, in 2 cases to infection of the urine with *B. coli*, which causes rigors in older children. Acute bronchitis and broncho-pneumonia accounted for 6 cases, congenital heart disease for 2, otitis media and choroiditis for 1 each, and in 7 no cause could be found. Seven cases were assigned to generalised tuberculosis, but in 3 of these 7 the convulsions were few in number. Syphilis accounted for only 5 cases. The idiopathic convulsions of early infancy are characterised by slight twitchings of the face and limbs, which gradually develop into regular convulsive seizures of short duration, during which the child is unconscious and afterwards drowsy. Thirty-five were investigated, 25 being boys and 10 girls. The births were normal in 19. Forceps were used in 12, but in all the birth was easy. Thirty-one were fed one cow's milk, or some food made from it. Slight dyspepsia was recorded in half the cases, 31 were in good health, in 2 no note was made, 1 was convalescent from influenza, and another was debilitated. Treatment is satisfactory, and consists of chloral in 1–2-gr. doses two-hourly. The results in 35 cases were as follows: 3 died of pneumonia and 2 died from unknown causes, 1 was lost sight of, and 2 became mentally defective; 15 recovered but were lost sight of. Two of the 12 died of infectious disease, while the remaining 10 have kept free from fits, asthma, or severe indigestion. The only danger of moment is aspiration pneumonia, the drowsy child having difficulty in swallowing. The author considers that these fits may be due to a modified form of anaphylaxis, and quotes a case in which asthma and urticaria occurred in a breast-fed infant after the ingestion of cow's milk.

CHRISTOPHER ROLLESTON.

Cerebral hæmorrhage in infancy ('*La Pediatria*,' 1921, XXIX, *p.* 168).—**L. Conti** describes a case in a girl, aged 1½ years who died, of a hæmorrhage of the basal nuclei and internal capsule. The history of attacks of shivering and sweating, the malaria-stricken locality, the pallor of the skin and mucous membranes, enlargement of the spleen and liver, presence of large mononuclears in the blood and urobilin in the urine, which was of a low specific gravity and contained hyaline casts, pointed to the diagnosis of a chronic malarial process causing a chronic nephritis, with consequent early vascular lesions of sufficient degree to produce rupture.

VINCENT DICKINSON.

Looking-glass writing; mirror writing (*'La Pediatria,'* 1921, XXIX, *p.* 301).—**G. Berghinz** says that during twenty-five years' experience at the children's clinic at Padua only two cases of mirror-writing have been observed. According to Baglioni the mechanism is central; the nerve impulses for graphic movements of the right hand cause, when passing to the left hand, symmetrical movements owing to the bilateral and symmetrical organisation of the nerve centres. In the first case, one of complete right hemiplegia from progressive encephalitis of the Heine-Medin type, the child when she began to write did so with the left hand in mirror fashion. Later on she wrote with the left hand either in mirror fashion or normally. In the second case the child was backward in beginning to speak, did not appear to be a deaf-mute although she always seemed to lip read, and could not understand what was said when spoken to in the dark. She was left-handed and had a small cranial development. She wrote with the left hand in mirror fashion but also normally with both hands when made to do so.

VINCENT DICKINSON.

Observations on mongolism (*'La Pediatria,'* 1921, XXIX, *p.* 49).—**O. Cozzolino** gives the following details of 23 cases of Mongolism which he observed between 1916 and May, 1920. Eighteen were males and 5 females, the youngest being 4 months and the oldest 10 years. All the children with 2 exceptions were under 2 years and 16 under 1 year. Only 1 showed the presence of Mongolian spots, so that Cozzolino does not agree with Pentagna, who maintains that Mongolian spots on the sacrum are characteristic of Mongolian imbecility. The familial occurrence of Mongolism was exemplified by the family, in which there were two cases. In one case there was congenital heart disease, probably patent interventricular septum, in one slight hypothyroidism, in two micromelia, which in one was confined to the upper limbs, and in the other involved all four limbs. The blood-pressure examined with Pachon's oscillometer in 8 cases was a little below normal. Dystrophic lesions in the fundus in the form of loss of choroidal pigmentation was found in 15 out of 17 cases examined. J. D. ROLLESTON.

The brain in a case of Mongoloid idiocy (*'La Pediatria,'* 1921, XXIX, *p.* 49).—**O. Cozzolino** describes the case of a boy, aged 21 months, in whom the autopsy showed the weight of the brain was below normal, the two hemispheres were asymmetrical, there was under-development of the frontal and fronto-parietal regions and diminished thickness of the cortical grey matter: relative simplicity of the cerebral convolutions with marked reduction in their number, and in the size of the folds and tertiary sulci; presence of depressions on the cortex; existence of certain characteristics, which must be regarded as ancestral or retrogressive or due to arrest of development such as inferior development of the inferior frontal convolution, the presence of an ethmoidal beak in the orbital aspect of the frontal lobe, extension of the parieto-occipital cleft on to the external aspect of the hemispheres, reduction in size of the quadrilateral lobe and simplification in its conformation, especially on the right side. These characters gave the brain the appearance of one belonging to an individual in whom, especially with regard to defective development of the brain-mantle, the higher psychical activities could not have evolved normally. VINCENT DICKINSON.

Ætiology of epidemic encephalitis (*'La Pediatria,'* 1920, XXVIII, *p.* 985).—**S. Maggiore and M. Sindoni** report experiments on this

subject. Two theories are prevalent, one that the affection is attributable to the influenza bacillus, the other that it is analogous or identical with Heine-Medin's disease. They found that they were able to isolate the germ of the latter from the cerebro-spinal fluid and from the blood and to reproduce the disease in animals by intracranial inoculation of the cerebro-spinal fluid or of cultures intravenously; identical clinical symptoms were produced in these cases. They consider the disease one of septicæmic type, with portal of entry in the naso-pharynx and secondary localisation in the nervous system. If any difference exists it is in the fact that in epidemic encephalitis, inversely to what obtains in Heine-Medin's disease, adults and children are affected with the same frequency. The good results of anti-influenzal vaccine treatment are to be explained by the mechanism being, not one of specific immune therapy, but one of protein therapy.

VINCENT DICKINSON.

Epidemic encephalitis (encephalitis lethargica) in childhood: with special reference to the changes in the cerebro-spinal fluid. (*'Glasg. Med. Journ.,'* 1921, I, *p.* 18).—**L. Findlay and C. Shiskin** present a very interesting review of the history, symptomatology, ætiology and pathology of this complaint. They submit personal observations on 24 cases in children seen during 1920. Most of the cases sickened in spring and early summer. Sex-incidence was a striking feature—20 were boys. The onset was sudden, with or without headache and slight fever, and the early development of choreiform movements. These latter at times were so severe that the patient jumped about in bed as if being tossed in a blanket. There was frequently present at the same time, or there appeared later, paralysis of some cranial nerve, or of a limb. The fever and choreiform movements usually subsided within a day or so, the excitability giving place to lethargy, which was of varying severity, sometimes only amounting to drowsiness, at other times being intense, amounting in fact to coma. The lethargy gradually got less, and was followed by the most remarkable nocturnal restlessness. Instead of falling asleep at the usual time the child seemed to become brighter. He might lie quite still with his eyes open, staring around; or at other times he would sit up in bed and ask for his books or toys. After a time he would lay these aside and lie down, as if prepared for sleep, only to be found soon after sitting up in bed shaking the pillows or re-arranging the bed-clothes. In more severe cases the children stand up in bed, write or draw on the wall, etc. In the late morning the child usually ultimately falls asleep and will then sleep until well into the forenoon. The behaviour of this restlessness suggested that it might be psychic in nature, but treatment by suggestion owing to the age of the patient proved unsuitable. In several cases hypodermic injection of sterile water gave promising results. The paralysis was usually of the extrinsic or the intrinsic muscles of the orbit, paralysis of accommodation frequently but never the Argyll-Robertson pupil, partial or complete paralysis of a limb; complete hemiplegia has been noted. Changes in the fundus oculi were observed in one case during the early manifestations—swelling of the disc with tortuosity of the veins and obscuration of the vessels in places. The cerebro-spinal fluid was carefully and systematically examined and full details of the changes found are given. The pathologist reported an absence of organisms in film and culture of all specimens submitted to him. As to treatment, urotropine and neokharsivan were tried without any apparent benefits. *Résumés* of the case-histories are appended.

J. ALLAN.

Optic neuritis in encephalitis lethargica (*'Lancet,'* 1920, II, *p.* 1245).—**C. P. Symonds** describes four cases of encephalitis lethargica in which optic neuritis occurred, two of them being girls aged 9 and 10 years. Buzzard and Vincent had previously described cases, while McNalty and Morax and Bullock described the fundi as normal. The first case occurred in a girl, aged 9 years, who became stupid at school work in January, 1920. She had pains in head, arms and legs, but continued at school. On March 1 involuntary movements of left hand and twitching of left side of mouth were noted. On March 17 high fever and enlarged glands developed. On March 25 she was unsteady on her legs, and in the course of a day or two became paralysed from the knees down. In June there were bouts of vomiting and headache for a week. In September she showed complete left homonymous hemianopia with double optic neuritis, the swelling being less than 1 D. There was slight defect of sensation in the arms and feet. There were involuntary movements of the left arm, most marked on excitement and vigorous bodily movement. The muscles concerned were the abductors and adductors of the shoulders, the pronators and supinators of the arms, and the extensors and flexors of the wrist. The movements were of small amplitude and consisted of three extensions per second. The lower limbs showed complete bilateral paralysis, with absent tendon reflexes. There was lymphocytosis of the cerebro-spinal fluid. In the girl aged 10 years there was a sudden onset with headache and vomiting, followed in two weeks by weakness of the legs. Acuity of vision and visual fields were normal. Both optic discs were hazy. Sensation was impaired in both arms and feet with tenderness in the calves. There was extensive weakness in the arms and legs, more marked in the latter. There was lymphocytosis and excess of globulin in the cerebro-spinal fluid. Both cases showed striking polyneuritic symptoms, but differed from polyneuritis by reason of the cerebro-spinal fluid changes and the optic neuritis. There is no evidence that the virus of poliomyelitis can give rise to polyneuritis. Optic neuritis is associated with disseminated myelitis, but the microscopical changes differ from those of encephalitis. CHRISTOPHER ROLLESTON.

Preliminary note on the use of psychological tests of mental retardation (*'Med. Officer,'* 1921, XXV, *p.* 49).—**H. Herd** states that school progress is a poor criterion as the children may be lazy and develop tardily. Testing each faculty is also untrustworthy, *e. g.* testing for memory by repeating nonsensical sentences makes no allowance for association, on which memory chiefly depends. Terman's modification of Binet's tests is favourably referred to. Six tests are allotted to each year from 3 to 10 and 2 months are allowed for each test up to 10, three or four months for the later years. Some of the tests are far more valuable than others; especially valuable are the "comprehensive tests," *e. g.* what would the child do under certain circumstances? the detection of absurdities in sentences, and the appreciation of similarity and contrast. But the greater value of these is not conceded in the mechanical method of scoring. Again, in the repetition of three sets of five numerals, a pass is recorded if the child succeeds in one set, but no extra credit is given if the child repeats all the three correctly. The educational factor enters considerably into the tests, as the author found that three markedly defective children succeeded very well in some of the tests, but further inquiry elicited the fact that they had been in a Montessori school. Due allowance must be made for heredity, school attendance, work out of school hours, and physical condition. CHRISTOPHER ROLLESTON.

Otology, Rhinology and Laryngology.

Hearing in the newborn (*'Il Policlinico, Sez. Prat.,'* 1921, XXVIII, *p.* 1010).—**O. Waltan** carried out observations at the Genoa Maternity Institute on fifty infants within the first hours or days of life and found that all the new born without exception responded by blinking or sometimes by tight closure of the lids and crying on the sharp, sudden and short sound of a pitch-pipe of 1080 vibrations to the second, while they did not respond to the tuning-fork, tam-tam or whistles. This indicates that in the newborn the perception of sound takes place through the air and not by a bony channel, as in the newborn ossification of the cranial bones is not complete, and there cannot be an osteotympanic transmission of sound as in the adult, in whom the cranial bones form a complete whole which better transmits the vibrations of sound. On approaching the pitch-pipe to within 1 cm. of the ear a movement of rotation of the head took place in the antero-posterior axis according to the side on which the sound was made, together with a lateral nystagmus of the eyeball on the same side. Waltan regards these movements of reaction as a defensive function and as a function of orientation probably connected with the three semicircular canals.

J. D. Rolleston.

Congenital malformation of the ear with facial paralysis (*'Rev. de lar., d'otol. et de rhinol.,'* 1920, XLI, *p.* 449).—**E. Bonnet-Roy** records a case in a boy, aged 5 years, in whom the right pinna was represented by a triangular projection with its apex below and base not extending above the upper pole of the tragus. There was atresia of the external auditory meatus. There was also incomplete facial paralysis on the same side. The child's physical and mental development was otherwise normal. The facial paralysis, which was not caused by the accoucheur, was probably due to defective development of the fibrous portion of the temporal bone, as on X-ray examination the mastoid process, which was normally developed on the left side, showed only cells above the shadow of the lateral sinus on the right.

J. D. Rolleston.

Middle-ear disease in children (*'New York Med. Journ.,'* 1920, CXII, *p.* 1024).—**J. Fieldman and S. D. Greenfield** point out the importance of examination of the ear in cases of unexplained pyrexia in children, before discharge has appeared, especially after measles, diphtheria or scarlet fever. If there be a good-sized opening in the drum the condition will not explain the fever, but if the hole be small and the drum bulging proper drainage should be secured. Sagging of the positive superior canal wall is an important sign, but does not in itself call for operation, as some of these cases clear up rapidly and completely.

J. Porter Parkinson.

Recurrent mastoiditis in children (*'Journ. de Méd. de Bordeaux,'* 1921, XCII, *p.* 445).—**P. Cadenaule** and **Retrouvey,** who report three cases in children aged 4, 7 and 11 years respectively, state that recurrent mastoiditis is a comparatively rare affection, barely forty cases having been reported since 1901, when Israel, of Turin, published the first five cases. A recurrence of mastoiditis may be said to occur when there has been a complete recovery after the first operation. Mastoiditis may be regarded as cured when the retro-auricular scar is normal, slightly depressed, without a scab or fistula, and is painless on pressure, when there is no discharge from the

ear or exudation in the tympanic cavity, when the perforation in the tympanic membrane is cicatrised and hearing has become normal again. Recurrence has been attributed to various causes, such as persistence of latent micro-organisms, defective cicatrisation, special vulnerability of a previously infected mastoid. As a rule there is only one recurrence, but in predisposed individuals several recurrences may take place. In one of the writer's cases the fourth operation occurred four and a half years after the first. Usually the mastoiditis recurs in the antrum at the site of the first operation, but in some cases it may attack one of the groups of antral cells. The recurrence generally takes place in the course of the first year, and most of the recorded cases have been observed between a few months and two years after the first attack. Moure, however, mentions a case in which recurrence took place after eight years, and Tarnaud reports one after seventeen years. The recurrence may develop at any age, even as late as 70 or 80, but it is most frequent in children, who are more liable than adults to ear complications.

J. D. Rolleston.

Pyodermia of the face and the external ear (*'Rev. de lar., d'otol. et de rhinol.,'* 1920, xli, *p.* 370).—**L. Bar,** who records an illustrative case in a girl, aged 3 years, states that pyodermia of the face may invade the concha and external auditory meatus and gives rise to an extensive simple or complicated otitis externa. The inflammation is usually confined to the external ear, and propagation to the middle ear is exceptional. Though superficial, the inflammation may be serious and give rise to periostitis, osteo-myelitis and thrombophlebitis of the sinuses. An increase in virulence of the organisms may lead to generalised septicæmia. Bar recommends that in all cases of pyodermia of the face careful antiseptic precautions should be taken to prevent the ear being infected.

J. D. Rolleston.

The Wassermann reaction in deaf-mutes (*'Rev. de lar., d'otol. et de rhinol.,'* 1921, xlii, *p.* 262).—**Ardenne** investigated the Wassermann reaction in twenty-three cases of deaf-mutism, which he divided into two groups. The first consisted of 11 children, in whom the deafness was undoubtedly congenital. In this group the reaction was positive in 8 and negative in 3. The second group consisted of 12 cases in which the deafness could be explained by a lesion of the middle ear or by a disease in infancy, such as cerebro-spinal fever, or in which the cause of the deafness was unknown. In this group the Wassermann reaction was positive in 5 and negative in 7. Although definite conclusions could not be drawn from so small a number of cases, Ardenne suggests that a systematic study of the Wassermann reaction in deaf-mutism will throw light on the ætiology of the condition.

J. D. Rolleston.

Congenital atresia and occlusion of the choanæ (*'Rev. de lar., d'otol. et de rhinol.,'* 1921, xlii, *pp.* 111 and 143).—**J. Mouret** and **P. Cazejust** state that this condition is fairly uncommon, and is liable to be mistaken for adenoids by practitioners who are not specialists. In the infant the symptoms vary according as the occlusion is bilateral and complete or bilateral and incomplete or unilateral. In cases of bilateral occlusion the symptoms are very grave. If the child does not die immediately after birth death takes place very rapidly as he can neither breathe nor suck. In cases of incomplete occlusion the symptoms are less severe. The cyanosis and

recession, which vary according to the degree of nasal permeability, increase during lactation. The child has occasional attacks of suffocation. His sleep is restless. Owing to deficient nourishment he loses flesh more or less rapidly and sooner or later death takes place. Occlusion of the choanæ must be distinguished from adenoids, enlargement of the turbinate bones, deviated septum, polypi and foreign bodies, and in the newborn from fibrinous laryngitis. Treatment is exclusively surgical, and consists in rendering the nasal passages as permeable as possible.

J. D. Rolleston.

Nasal stasis (*'Med. Times,'* 1920, xlviii, *p.* 98).—**Octavia Lewin** describes nasal stasis as a condition of nasal obstruction, either partial or complete, that is, due to no organic fault, but merely to a collection of dust or *débris* and semi-dried secretions, that is not or cannot be cleared away by natural methods, the result being that full breathing cannot be accomplished without having to keep the mouth open, or at any rate having to open it at frequent intervals for a gasp of breath. She discusses ætiology, symptomatology, complications, diagnosis and treatment. She points out that the aim of all nasal treatment is to preserve or to restore full nasal breathing and to abolish all necessity for supplementing it with the open mouth. The only safe way of clearing the passages and restoring the natural functions is by natural methods, namely, by sneezing and blowing outwards. Simple mechanical laws are then followed, and grave pitfalls are avoided. Instruction in the laws of nasal hygiene should be part of the ordinary curriculum in early days of school when bad habits can be forestalled or corrected if already established. The questions of food and clothing are also of vital importance as they have a considerable influence on respiration. Breathing exercises should be withheld in all cases of nasal obstruction lest they should further tax the lungs, already overburdened with the air supplied to them unfiltered, unwarmed and unmoistened. J. Allan.

Glioma of the nasal fossa (*'Rev. de lar., d'otol. et de rhinol.,'* 1920, xli, *p.* 593).—**Anglade** and **Philip** report the case of an infant aged 3 days whose right nostril had been obstructed since birth by a small red tumour projecting at the nasal orifice. Respiration was stertorous and sleep was disturbed. The tumour, which was the size of a kidney bean, was removed with relief of the symptoms. A recurrence took place three months later, a tumour was again removed and an application of radium was employed with success. The writers have found only four other cases of nasal glioma on record, in two of which the tumour was situated at the root of the nose and in the other two was intranasal. Possibly, however, the condition is less rare than is supposed, as in the first place a large number of nasal tumours are removed without histological examination, and secondly the method required to reveal neuroglia is an elaborate one. J. D. Rolleston.

The tonsil and its function (*'Glasg. Med. Journ.,'* 1920, ii, *p.* 344).—**J. Harper** examines the question of the possible function of the tonsil from three points: (1) From a developmental point of view; (2) phylogenetically; and (3) to seek for some ill-effect on the organism due to the loss of such possible function. He attempts to prove that the tonsil is a source of grave potential danger to the child, and he maintains that its early and complete removal should be insisted on should there be any reason to suspect that its presence is having an ill-effect on the well-being of the individual.

J. Allan.

Unhealthy tonsils and cervical adenitis (*'Lancet,'* 1921, II, *p.* 997). —**W. Howarth** and **S. R. Gloyne** ask, Is the palatine tonsil a common portal of entry for the tubercle bacillus, and are enlarged and unhealthy tonsils usually tuberculous, or does the tonsil become enlarged from septic absorption and only harbour the tubercle bacillus occasionally? Only cases of unhealthy tonsils complicated by enlarged glands were investigated. The tonsils were removed completely in their capsules. Films were made from the muco-pus of the throat and from the tonsils, and sections of the latter were also cut and examined, and the remainder of the tonsils were ground together in a mortar, treated with antiformin, centrifuged, and the deposit inoculated into guinea-pigs. Out of 100 cases, 95 showed no evidence of tuberculosis. In 5 giant-cell systems were found, and 2 of these showed acid-fast bacilli identical with tubercle bacilli. No positive results were obtained from inoculating animals, which may be explained by the small number of organisms present and low virulence. The authors conclude that the tonsils are enlarged from sepsis, and that subsequently tubercle bacilli are implanted. The cervical glands are enlarged from septic absorption and usually subside on removal of the tonsils. CHRISTOPHER ROLLESTON.

Essential cases of adenoids (*'Lancet,'* 1921, II, *p.* 994).—**H. Merrall.** —The varying views of pædiatrists and rhinologists are detailed and the importance of repeated colds is emphasised. Among the associated defects the author finds that flat-foot is almost constant. The chief function of the naso-pharyngeal tonsil is to sterilise the incoming air. When it and the tonsil become enlarged and fibrous they are unable to function. The patient becomes anæmic and flabby and consequently flat-footed, while the septic condition of the throat sets up a similar condition in the abdominal organs, and in a few appendicitis supervenes. The author thinks that this catarrhal state is the visceral manifestation of rickets.

CHRISTOPHER ROLLESTON.

Adenoids as manifestations of hereditary syphilis or tuberculosis (*'Rev. de lar., d'otol. et de rhinol.,'* 1921, II, *p.* 517).—**Armengaud** states that by inquiring into the heredity and family history of children with adenoids he usually found in the parents various syphilitic manifestations, such as chronic aortitis, aneurysm of the aorta, arteriosclerosis, interstitial nephritis, chronic hepatitis, chronic myelitis, tabes, general paralysis and chronic arthropathies, while examination of the children suffering from adenoids showed stigmata of hereditary syphilis, *e. g.* Hutchinson's teeth, irregular implantation of the teeth, high arched palate and sinking in of the nasal bones. Castaigne, who performed the Wassermann reaction in 42 cases of adenoids, found a positive reaction in 31. Of these 42 cases 24 presented stigmata of hereditary syphilis, and 14 were considerably improved by anti-syphilitic treatment. These facts show the importance of syphilis in the ætiology of adenoids. In another series of cases Armengaud found that the parents had suffered at one time from tuberculous manifestations such as pleurisy, asthma, peritonitis and osteitis, while the children presented suppurative cervical adenitis and signs of chronic enteritis or chronic peritonitis. While not denying the advantage of surgical treatment of adenoids when they cause nasal obstruction, otorrhœa or recurrent bronchitis, Armengaud emphasises the importance of looking for hereditary syphilis or tuberculosis in such cases and adopting appropriate medical treatment.

J. D. ROLLESTON.

The results of the presence of adenoids in infancy (*'New York State Journ. Med.,'* 1921, xxi, *p.* 50).—**R. G. Freeman** maintains that an obstructive adenoid should be removed by operation as soon as it has persisted several months. Those cases in which it has existed from birth should be operated on by the third or fifth month. Neglect to operate at this time leads to the development during the first year of the short upper lip, the narrow high vault, and the collapsed nostrils which are associated with the adenoid face. Neglect to operate at this time leads also in certain cases to reflex conditions, failure to gain in weight, restlessness, convulsions, asthma and eczema. J. Allan.

Risk after operation for tonsils and adenoids (*'Brit. Med. Journ.,'* 1920, ii, *p.* 887).—**Watson Williams** says that the following precautions are taken at Bristol. No children living outside Bristol, no sickly child and no child from an "epidemic area" are treated in the out-patient department. A fluid breakfast is allowed three hours before operation, which is performed in the middle of the morning. Gas or ethyl chloride is used. The child is inspected at 2 p.m. before departure and advised not to walk a step or go out for three or four days. Formamint lozenges are given to suck. The results of 100 in-patient cases are compared with 239 cases in the out-patient department. Among the in-patients there was only one unfortunate result, a case of acute otitis, as compared with 7 among the out-patients. Acute mastoid disease occurred in 3 of the out-patients, as compared with none among the in-patients. There was 1 fatal case of meningitis among the out-patients. Christopher Rolleston.

Tonsillectomy under local anæsthesia in children (*'Nederl. Tijdschr. v. Geneesk.,'* 1921, i, *p.* 2409).—**A. S. Jacobson** has performed tonsillectomy under local anæsthesia on 162 patients, 37 of whom were children under 14 years of age without any hæmorrhage or other sequelæ. He maintains that tonsillectomy under general anæsthesia is more dangerous owing to the possibility of the *status lymphaticus* and the greater risk of aspiration pneumonia. J. D. Rolleston.

X-Ray treatment of tonsils and adenoids (*'New York State Journ. Med.,'* 1921, xxi, *p.* 14).—**W. D. Witherbee** states that it would seem probable that X-ray treatment will be indicated in cases of diseased tonsils and infra-tonsillar lymph-nodes associated with chronic endocarditis, pericarditis, hæmophilia or any co-existing conditions which contra-indicate operation or an anæsthetic. After tonsillectomy in subjects above the sixth or eighth year there still remains a considerable and possibly a vast amount of diseased lymphoid tissue containing pathogenic bacteria, and in these cases it would seem reasonable to believe that the X ray will prove to be of value. J. Allan.

Statistical records of serious and fatal hæmorrhage following operations on the tonsils (*'Brit. Med. Journ.,'* 1921, ii, *p.* 431).—**A. Brown-Kelly** states that 10 cases were described between 1887 and 1892. Two of these were in children of 14 and 7 years and the rest in adults. Hæmorrhage set in a few hours after the operation. Between 1916 and 1920 O. Wilkinson reported severe hæmorrhage in 7 out of 200 operations: 4 of these were cases of primary and 3 of secondary hæmorrhage. Mygind reported secondary hæmorrhage in 8 per cent. of his cases. Most of his

patients were between 30 and 40; none were under 15. It could always be checked by ligature. McKinney reported 2 severe hæmorrhages in cases complicated by renal disease. Douglas Beaman reported on 1560 operations. Hæmorrhage occurred in 6·5 per cent. of the cases, most of whom were children. In 90 cases there was only slight capillary oozing, in 6 instances the bleeding vessel had to be clamped and in 1 ligature of the pillars was required. I. Moore had one alarming hæmorrhage in a boy, aged 6 years, checked by sponge pressure and an injection of atropine and morphine. The same authority had seen 17 other cases of severe hæmorrhage; 10 of these were adults. The faucial pillars had to be sutured in 3 of the latter. Courtenay Yorke, on the other hand, has never had to apply a ligature or stitch the pillars in a series of over 6000 cases. Cases of very serious hæmorrhage are recorded in patients afflicted with cardiac or renal disease. Well over 40 cases of pulmonary abscess following operations on the tonsils have been recorded. Manges reports 9 cases seen in his medical clinic at Mount Sinai Hospital with a mortality of 11 per cent. In one instance resection of a lobe of the lung and in another artificial pneumothorax were required. It may be due to aspiration of blood into the lungs—an hypothesis supported by the facts that (1) signs and symptoms developed in thirty-six hours, (2) the patient was operated on in the supine position, (3) the abscess was solitary and developed in the middle or lower lobe of the right lung. Septic thrombosis of the vessels in the tonsillar bed accounts for those cases which do not develop till from four to fourteen days after the operation.

CHRISTOPHER ROLLESTON.

Conditions predisposing to hæmorrhage in tonsil operations (*'Brit. Med. Journ.,'* 1921, II, *p.* 433).—**J. F. O'Malley** states that patients under 14 lose 2½ to 4 oz. of blood; those over 3½, 5 oz. Age favours hæmorrhage, as in adults the tonsils are more vascular and fibrous, and increased blood-pressure and arteriosclerosis come into play. During menstruation and the week preceding it there is more liability to hæmorrhage. Tortuous and pulsating carotids, internal pharyngeal arteries and angiomata may also cause trouble. Fibrosis of the tonsil prevents retraction of the cut blood-vessels and is therefore a source of danger, especially in tonsillotomy. Suppuration within the tonsil may lead to erosion of the blood-vessel or to aneurysm. Exophthalmic goitre and heart disease are also stated to be causes of severe hæmorrhage, but were not found so by the author. No operation should be undertaken during acute inflammation or suppuration, or ulceration, nor for three weeks after subsidence of these conditions. The coagulability of the blood can be increased by calcium lactate, horse and human sera. Hæmoplastin is advised by Kisch, and is given by him in a of dose 1 c.c. 15 minutes before the operation and directly after. Pituitrin is recommended in a 15-minim dose half an hour before the operation.

CHRISTOPHER ROLLESTON.

Surgical removal of tonsils: method of arresting serious hæmorrhage (*'Brit. Med. Journ.,'* 1921, II, *p.* 437).—**I. Moore.**—Hæmorrhage at time of tonsillotomy is controlled by sponge or swab pressure. Ice-cold water is of great service. Reactionary hæmorrhage, occurring three to six hours after operation, is treated by removing the blood-clot and ligating any bleeding point. The most serious type is a slow, persistent oozing, which should be controlled by sponge-pressure exercised by the thumb of the surgeon, the corresponding finger being below the angle of the jaw.

In complete tonsillectomy the hæmorrhage during the operation is usually of an oozing character, and is best controlled by a cotton-wool or gauze swab placed between the partially separated tonsil and the tonsillar bed. Similar methods are applied for the hæmorrhage occurring directly after the operation. A tongue spatula ensures a good view. Spurting vessels should be ligatured, but if only a small bleeding muscular area is detected it should be seized by forceps and ligated. If temporary suture of the faucial pillars is adopted the operator sits or stands at the head of the anæsthetised patient. The ligature is carried on a half circular needle with the eye close to the point, attached at a definite angle to a slender shaft $3\frac{1}{2}$ in. long. The needle is passed from before backwards in the case of the right tonsil first through the anterior pillars of the fauces and then through the posterior, $\frac{1}{4}$ in. from the free margin; as regards the left tonsil, the needle is passed first through the posterior faucial pillar. The ligatures should be cut at the end of twelve hours by angular scissors. The following precautions are advised: (1) Operation should only be performed in a hospital or nursing home. (2) A purgative should be given two days before the operation. (3) No alcohol or smoking for four days before the operation. (4) An expert anæsthetist is necessary and ether is the anæsthetic of choice. (5) After the operation the patient should be placed in bed in the lateral position, so that any bleeding may be detected by the nurse. (6) While the patient is coming round a cork should be placed between the teeth to prevent swallowing. (7) Restlessness should be controlled by morphia.

CHRISTOPHER ROLLESTON.

Practical consideration on treatment of hæmorrhage during and after operation on the tonsil (*'Brit. Med. Journ.,'* 1921, II, *p.* 440).—**Dan McKenzie** says that hæmorrhage is rare in children operated on by the guillotine. In adults the guillotine method is frequently attended by loss of blood. The usual sites of hæmorrhage are: (1) The posterior aspect of the anterior pillar of the fauces; (2) the middle of the bed of the tonsil; (3) the lower end of the wound in or near the tongue; (4) the upper pole of the wound under the hood of the soft palate. The first is the commonest site, and a long straight pair of forceps is used and the posterior surface of the pillar is nipped, not with the point, but with the side of the forceps. The ligature is passed round the shaft of the forceps, given one turn of the knot, and then slid down by means of dissecting forceps over the free end of the pressure forceps and then tightened and tied. In post-operative hæmorrhage Watson Williams' clamp may be applied for two or three hours, taking care to apply it well down in the tonsillar bed.

CHRISTOPHER ROLLESTON.

The place of the anæsthetist in operations on the tonsil (*'Brit. Med. Journ.,'* 1921, II, *p.* 443).—**G. A. H. Barton** prefers ether preceded by atropine and a little ethyl chloride. A Shipway apparatus should be used. The tongue should be kept well forward. The dorsal position, with the head well extended, is the best for the anæsthetist.

CHRISTOPHER ROLLESTON.

Treatment of Vincent's angina (*'La Pediatria,'* 1920, XXVIII, *p.* 1037).—**F. P. Borrello** publishes seven cases of Plaut-Vincent's fuso-spirillary treated with intravenous injections of neosalvarsan. Usually two or three injections of five cgrm. sufficed. Cure resulted in about fourteen days.

VINCENT DICKINSON.

Cicatricial stricture of the œsophagus in children (*'Rev. de lar., d'otol. et de rhinol.,'* 1920, XLI, *p.* 433).—**A. Brindel** records five cases of apparently impermeable stricture of the œsophagus in children aged from 5 to 11 years following ingestion of caustic potash. He found that the stricture was due partly to an inflammatory condition surrounding the fibrotic ring and still more to a spasm, and came to the conclusion that the stricture could be caused to disappear by œsophagoscopy guided by radioscopy. He regards electrolysis and œsophagotomy as useless in such cases. J. D. ROLLESTON.

Tonsillar adenitis.—(*'Rev. de lar., d'otol. et de rhinol.,'* 1920, XLI, *p.* 353.) **G. Portmann**, who records two illustrative cases, defines this condition as a subacute tonsillitis with lymphoid hyperplasia, without any other naked eye manifestations than a considerable increase in the size of the tonsils. The condition, which is most frequent in childhood and adolescence, takes three or four days to develop, and is accompanied by cervical adenitis without much fever or general disturbance. There is slight difficulty in swallowing and interference with speech and respiration. After two or three weeks the symptoms begin to subside, and at the end of four or five weeks the tonsils have resumed their normal appearance. In exceptional cases one or both tonsils remain hypertrophied. Tonsillar adenitis, which may recur at relatively short intervals, must be distinguished from chronic enlargement of the tonsils, which is almost always bilateral and is subject to no change except attacks of acute tonsillitis. The chief distinction, however, is that chronic hypertrophy does not subside in a few weeks. Treatment consists in a single application of a solution of zinc chloride (1 in 40 or 50), followed by the use of an emollient throat-wash containing borax and benzoate of soda, and later of an astringent gargle containing guaiacum and rhatany. J. D. ROLLESTON.

Reviews.

LEHRBUCH DER SÄUGLINGSKRANKHEITEN. By Prof. H. FINKELSTEIN. Berlin: Julius Springer, 1921. Second edition. With 174 illustrations and diagrams, partly in colour. Price 140 marks.

SINCE the publication of the first edition of Finkelstein's text-book on the diseases of infancy ten years have elapsed. In its second edition, published this spring, it has grown to formidable proportions, and extends to some 850 pages, closely printed and still more closely reasoned. The book is divided into five parts.

(1) The Development and Nourishment of the Infant, 118 pages. (2) The Damage to the Infant in its Passage from Fœtal to Extra-uterine Life, 62 pages. (3) Disturbances of Growth and Nutrition, 190 pages. (4) General Infections, 102 pages. (5) Diseases of Single Organs, 384 pages.

In pædiatrics no book has had a greater influence during the last ten years than Finkelstein's, and in Germany at least its author has been recognised as one who has gained for himself a unique position and to whose opinion attention must be paid. We think that the present edition will do nothing

to unseat the author from this high place. The book is written with a point and freshness which makes German seem quite an attractive language, whilst it emphasises its advantages for accurate statement, classification and nomenclature. A good deal of the terminology which in German sounds both appropriate and distinctive is almost untranslatable into English. In Berlin Finkelstein does not sit in the seat of his great teachers Henoch and Heubner—before the war much besides mere professional distinction was considered in making these appointments—but he has certainly inherited their powers of clinical observation and exposition in full measure.

It is, however, to the third section to which most readers will turn with the greatest interest and expectation. In these pages Finkelstein plunges very deep in the attempt to bring forth some clear conception of the nature and origin of alimentary and nutritional disturbances in infancy, always with the object before him of gaining indications for dietetic control. It is easy, as many in this country have done, to express a complete disbelief in the value of the attempt, and to refuse to be drawn into the intricacies of speculation concerning the difference between "Ernährungsschäden" and "Toxicosen," or even between "Decomposition" and "Intoxication." Yet in all this deep striving after a clear conception of the nature of disturbances which are little understood, little amenable to treatment and highly fatal, we feel that the author preserves a critical and balanced judgment, and is in no way carried off his feet by too brilliant speculations or too airy hypotheses. In not a few points we believe that he has demonstrated truths which were either unrecognised or subjects of dispute. We believe that Finkelstein's teaching upon the origin, nature and treatment of that common abnormal reaction to a diet composed of cow's milk, called by Czerny "Milchnährschadung," is correct, and that his analysis of the *rôle* of carbohydrates in the infant's dietary and of the peculiarities of different forms of carbohydrate, separately or in combination, is both true and valuable.

As he looks back upon all the labour and effort of the last quarter century, and asks himself what advance has been made, what increased power has been given to us to control the disturbances so prone to arise in artificial feeding, Finkelstein shows himself no optimist. He sees in it all no reason for jubilation, or, as he says, to cry "wie herrlich weit wir es gebracht!" He consoles himself with the thought that from this work there at least arise "many ideas for possibilities." Certainly it is just these "ideas for possibilities" which have been wanting in the whole business in this country. It is with us only lately that work on these subjects has been begun, work which, if pursued to its end, cannot fail to interfere with the position of the experienced ward sister as representing the supreme authority upon matters so obscure. Clinicians in plenty in this country will recognise the value of Finkelstein's clinical studies; it must be left to the work of those who are now attacking these problems from the chemical side to pronounce upon the value of his ætiological hypotheses. H. C. C.

Diseases of Children. By Herman B. Sheffield, M.D. Pp. 798. London: Henry Kimpton, 1921. Price 48*s*. net.

This volume, which is described by the author as the consummation of nearly thirty years' experience in the field of pædiatrics, gives a concise presentation of recent teaching as to the theory and practice of the diseases of children, and embodies many excellent features. The section on infant feeding is unusually full, and includes various formulæ for the modification

of milk, as well as special dietaries for infants and older children. There is a useful chapter on the examination of the patient and semeiology of disease, as well as a long section on the prevention and control of disease, in which a survey is made of the most modern methods of laboratory diagnosis, such as the Schick, Wassermann, Widal and Weil-Felix reactions, and the complement-fixation and tuberculin tests for tuberculosis. Although obviously the bacteriology of disease is outside the scope of a text-book of this nature, a few words on the examination of the sputum, with special reference to the characteristic staining properties of the tubercle bacilli, would probably have been of more value to the busy general practitioner than the more or less detailed description of the technique involved in the various serum tests and reactions just enumerated.

In the matter of arrangement, Dr. Sheffield has in several instances departed from the more usual classifications of diseases. In this connection Dr. Thomas McCrae has recently pointed out the difficulties of adhering consistently to any rigid plan, and the classification adopted by Dr. Sheffield, in order, as he explains, the more closely to correspond with the modern conception of the causation of certain diseases, is in some cases—such as his inclusion of multiple exostoses and of osteo-sarcoma among the specific communicable diseases—open to criticism. In the nomenclature adopted some more or less unfamiliar terms are met with, *e. g.* ileocolitis epidemica for dysentery, hæmorrhœa congenita for hæmophilia, hæmorrhœa acquisita for various forms of purpura, and pneumohypoderma for emphysema cutis.

In discussing diphtheria, stress is laid on the permanent immunity said to be effected by means of the diphtheria toxin-antitoxin—but Dr. Sheffield, although quoting at some length the conclusions arrived at by one or two American authorities, does not appear himself to have had any practical experience of it. He is a warm supporter of intubation in laryngeal diphtheria, tracheotomy only being recommended where intubation is impracticable, or has failed to give relief. We regard it as unfortunate that wine and brandy should be described as "of inestimable value" both as food and stimulant in diphtheria, especially in the septic variety, Dr. Sheffield urging that in malignant cases it should be given in large, frequently repeated doses. Strychnine and digitalis are also recommended for heart weakness. J. D. Rolleston, however, pointed out many years ago the uselessness of alcohol and strychnine as cardiac remedies in diphtheria, while adrenalin, which the same authority regards as his *unica spes unicum remedium*, and which, unlike brandy, exercises when given in the moderate doses recommended by him no toxic effect on the heart, is not even mentioned by Dr. Sheffield.

A cautious attitude is adopted in discussing the pathogenesis both of Addison's disease, which according to the author is as yet awaiting correct interpretation, and of whooping-cough, the specific germ of which is categorically stated to be still unknown, although the author adds that "there seems ample reason for the belief that the bacillus described by Jochmann, Krause, Bordet and Gengou is the immediate cause of the disease."

In discussing the treatment of cystitis the curious statement is made (p. 585) that urotropine acts best in combination with potassium citrate, whereas it has been established that the mode of action of this drug is by the liberation of formaldehyde, which takes place more readily in the presence of acid than of alkali. Experiments confirming this have been described by Martindale and Westcott, their investigations having established the fact that though the amount of formaldehyde liberated from therapeutic doses of

urotropine is not sufficient to kill *B. coli*, the slow generation of formaldehyde by the drug in the presence of acid has the desired effect.

The section on diseases, organic and functional, of the nervous system is interesting, and as detailed as can be expected in a text-book of modest size which covers such a wide scope. Under the heading of "Amentia," in a succeeding chapter, idiocy and many allied mental deficiencies of childhood, including cretinism and mongolism, are described, and a few of the Binet-Simon tests—or modifications of them—of mental development are appended.

The numerous illustrations, several of which are in colour, are of unusual excellence, adding materially to the value of the work. E. M.

Physiologie Normale et Pathologique du Nourrisson. By E. Lesné and Léon Binet. Pp. 297. Paris: Masson et Cie, 1921. Price 18 fr.

This volume supplies a definite lack in existing medical literature, embodying as it does the sum of our present knowledge of the physiological and metabolical processes of the young infant in health and disease. The authors, who are both medical men, write from the point of view of physiologist and clinician respectively, their joint work having thus a special value of its own. A large number of authorities have been consulted, an alphabetical list at the end of the book containing over 700 names, but the work of English physiologists and pædiatrists has scarcely received adequate recognition.

In the seventeen chapters of this book are discussed the blood, the circulatory mechanism, respiration, feeding, the digestive apparatus, urinary system, mammary and genital glands, skin, thermometry and calorimetry, growth, nervous and muscular systems, movement, special sense-organs, chemical composition of the body, and the means of defence possessed by the organism. These subjects, which cover the whole range of physiology as far as it concerns the young infant, are treated with commendable fulness and thoroughness, the authors having incorporated in the book the results of experiments of their own on young animals.

Much of this work is of practical interest to the physician, whose knowledge of the hygiene and of the treatment of the diseases of infancy should be founded upon an accurate knowledge of its physiology, which differs widely and in so many ways from that of the adult.

A considerable section of the book is given up to a discussion of breast and artificial feeding and of the composition of milk. The authors, while advocating suckling where possible, give a somewhat lengthier list of contra-indications than would be approved of by many pædiatrists in our own country, these contra-indications including tuberculosis, malignant disease, all organic affections of the nervous system and most of the neuroses. The section on the quantitative and qualitative feeding of the nursling is particularly full, and embodies some of the more recent teaching on the vitamins.

The whole volume forms a monograph of unusual interest, and is well worthy of careful study by the general practitioner as well as by the specialist.

The addition of an index would greatly facilitate the use of the book as a work of reference. E. M.

Contributions to the Study of Precocity in Children; The History of Neurology. By the late Leonard George Guthrie, M.A., M.D., F.R.C.P. 8vo. Pp. 160. London: Eric G. Millar, 1921.

This little book consists of the Fitzpatrick Lectures on the History of Medicine, delivered at the Royal College of Physicians, London, in the years 1907 and 1908. A foreword by a relative says that the lectures are printed as they were left at the time of the author's death—that is to say, not yet completely arranged for publication. They will certainly serve as a memorial of Dr. Guthrie to his many friends, and will be read with interest by many others. As a neurologist and children's doctor and writer on precocious physical development in children, he was well suited for discussing both the subjects of the book. From his conclusions on page 68 we would quote: "Any system of education that does not allow for individuality of mind, tastes and character may be harmful. It is certain that children of mediocre ability as well as those of the psychasthenic type of precocity may suffer from mental strain in consequence of over-pressure. Clever children who possess strong nervous endowment can accumulate knowledge with impunity. It is the psychasthenic variety which is most frequently brought to naught. . . . The precocious child is not necessarily a genius, but by careful management he may, at least, be prevented from becoming a failure." In regard to the *rôle* now attributed to the pineal gland in some cases of physical precocity it is interesting that Galen thought it served mainly for the support of the large veins in its neighbourhood. "Some thought that the conarium acted as a watchman to prevent overflow of the spirits from the third to the fourth ventricle. . . . This may have suggested to Descartes his whimsical views of the importance of the pineal gland as the seat of the soul" (p. 94). Prof. L. Bolk, of Amsterdam ('Lancet,' 1921, ii, p. 592), thinks that in certain cases the pineal gland may give rise to premature sexual development in children—a physiological atavism—by causing the arresting influence of the endocrine system on the function of the genital glands to be insufficient. F. P. W.

Polycythæmia, Erythrocytosis and Erythræmia (Vaquez-Osler Disease). By F. Parkes Weber, M.A., M.D., F.R.C.P.Lond. London: H. K. Lewis & Co., 1921. Price 21s. net.

This volume approaches very closely to the ideal medical monograph. The name of the author is a guarantee that no small erudition has been brought to the task before him. The result is a unique contribution to scientific literature. It is true that no decisive conclusion as to the nature of erythræmia is or could be reached. This does not detract from the usefulness of relegating to their proper positions the many syndromes with which the disease described by Vaquez and Osler has been confused. It is highly desirable for students of the subject that Ayerza's syndrome, the polycythæmia hypertonica of Geisböck and those cases which seem to depend on thrombotic obstruction of the portal vein should be sharply divided from true erythræmia. All this Dr. Parkes Weber does with skill and precision. Although erythræmia is really the subject of this book, there is a balanced consideration of other varieties of polycythæmia not associated with splenomegaly. The title is to this extent misleading, in that the space given to erythræmia in the book shows that this disease was chiefly in mind when the author commenced to write. Other varieties are mentioned more as illustrations or to elucidate diagnostic problems than for their own sake. We should have welcomed more detailed treatment of polycythæmia

neonatorum and its probable relation to icterus occurring in the first few days of life. The index of authors and references to the literature are very full, but the index to pages is unsatisfactory, owing to an absence of alphabetical order in the arrangement of sub-headings. These are small blemishes on a book which adequately summarises the world's literature on erythræmia without obscuring the views of the author, and this volume is indispensable to all who would study polycythæmia. G. W.

L'Année Thérapeutique. By L. Cheinisse. Paris: Masson et Cie, 1921. Pp. 144. Price 6 francs net.

Into this small volume Dr. Cheinisse, Editor of the Therapeutic Section of the *Presse Médicale*, has managed to compress a large amount of information, gathered from various sources, which he has set out in such a way as to render it particularly easy of reference. The work covers a large proportion of the more notable therapeutic advances made during 1920, not all of which have yet, however, substantiated the claims made on their behalf by their respective discoverers.

The plan adopted is an alphabetical arrangements of diseases under each of which headings the new methods of treatment are given, the excellent index provided facilitating reference to any drug or procedure referred to in the volume. While the book does not deal extensively or even mainly with children's diseases, there is much that is of direct interest to the pædiatrist, such as the section on tuberculous adenitis in which is discussed the intensive iodine treatment, consisting of increasing doses of the tincture till a maximum of 120 or 140 minims daily has been reached. In the treatment of Vincent's angina Dr. Cheinisse gives details both of the arsenobenzol medication—the use of which, however, he deprecates—and of the non-specific methods, including among the newer drugs which have been tried with some measure of success chromic acid, salicylic acid, and pyoktanin blue (methyl violet). For whooping-cough the two remedies commented on are benzyl benzoate, which has not been an unqualified success in this country, and the intramuscular injections of ether, first described by Prof. Audrain in 1914, and used by him in many acute infections, and since given an extended trial by various authorities, and favourably commented on by them. It may be noted in passing that similar intra-muscular injections of ether were recommended by Lassalle in broncho-pneumonia—a point to which attention is drawn in this book. The last ten pages of the volume deal with various *minutiæ* in the technique of subcutaneous and intravenous injections, as also of serotherapy in diphtheria.

Dr. Cheinisse has done a great service in collecting from the literature some of the scattered references to new preparations or methods, and thus of making them more accessible to the busy general practitioner who likes to keep abreast of the times. E. M.

What the Mother of a Deaf Child Can Do. By Margaret Martin. Stoke-on-Trent. Price 6d. net.

This highly useful little book is issued jointly by the National College of Teachers of the Deaf and the Glasgow Deaf Children's Society. It should be in the hands of all who have to do with children, deaf or hearing, for it describes clearly and precisely how a hearing child learns to speak, how this is applied to the deaf child, and how the mother can help. A short introduction from Dr. Kerr Love emphasises the fact that almost all deaf

children are mentally sound, and that when a child is born deaf or becomes so by disease, his hearing will never return.

If this book—issued at the small cost of sixpence—were in the hands of every general practitioner, it would do much to dispel the remarkable ignorance that prevails concerning deaf children. M. Y.

The Rockefeller Foundation. By George E. Vincent. New York, 1921.

This abbreviated report of the Foundation, issued as a preliminary to the complete annual report, serves the double purpose of a review of the work accomplished during 1920, and the programme contemplated for 1921. The activities initiated or prosecuted during the year, either by the Foundation itself, or, more commonly, through its departmental agencies—the International Health Board, the China Medical Board, and the Division of Medical Education—included gifts of 5 million dollars to University College Hospital, 1 million francs to La Fondation Reine Elisabeth in Belgium, 3 million dollars for the University of Brussels Medical School, 5 million dollars for Canadian Medical Education, the foundation of fellowships in public health, grants in aid of campaigns against tuberculosis, malaria, yellow fever and hookworm disease, as well as help for the reorganisation of the public health laboratory system in Czecho-Slovakia, and of medical work in China. It will be seen that the activities of the Rockefeller Foundation are literally world-wide in pursuance of its avowed aim of contributing to the progress of the world by helping to increase the common store of knowledge as to the causes of disease, and through demonstrations and the services of trained experts to diffuse this information as widely as possible among all the peoples of the world.

The report points out the vital importance of research facilities in medical schools in view of the increasing emphasis that is being laid on preventive work in medicine; and in this connection some details are given of the considerations affecting the munificent gift to British medicine.

The programme for 1921 includes continued support of medical training and research in various countries, the Foundation having definitely restricted its work almost entirely to a few broad undertakings in public health and medical education. Thus, out of 788 applications for aid received during this year, all but 50 had to be refused in order to concentrate on a large enough scale upon the lines already mapped out.

The Rockefeller Foundation may sincerely be congratulated on the statesmanship and far-sightedness shown in its plan of campaign, and on the results already achieved. E. M.

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